



UNIVERSITAT DE
BARCELONA

Testing a New Comprehensive Model for Eating Disorder Symptoms and Academic Achievement Among Spanish and Iranian Undergraduates: The Relationships Between Parental, Developmental, External, and Cognitive Factors, Body Image Concerns, and Self-Efficacy

Zahra Zabolipour

ADVERTIMENT. La consulta d'aquesta tesi queda condicionada a l'acceptació de les següents condicions d'ús: La difusió d'aquesta tesi per mitjà del servei TDX (www.tdx.cat) i a través del Dipòsit Digital de la UB (diposit.ub.edu) ha estat autoritzada pels titulars dels drets de propietat intel·lectual únicament per a usos privats emmarcats en activitats d'investigació i docència. No s'autoritza la seva reproducció amb finalitats de lucre ni la seva difusió i posada a disposició des d'un lloc aliè al servei TDX ni al Dipòsit Digital de la UB. No s'autoritza la presentació del seu contingut en una finestra o marc aliè a TDX o al Dipòsit Digital de la UB (framing). Aquesta reserva de drets afecta tant al resum de presentació de la tesi com als seus continguts. En la utilització o cita de parts de la tesi és obligat indicar el nom de la persona autora.

ADVERTENCIA. La consulta de esta tesis queda condicionada a la aceptación de las siguientes condiciones de uso: La difusión de esta tesis por medio del servicio TDR (www.tdx.cat) y a través del Repositorio Digital de la UB (diposit.ub.edu) ha sido autorizada por los titulares de los derechos de propiedad intelectual únicamente para usos privados enmarcados en actividades de investigación y docencia. No se autoriza su reproducción con finalidades de lucro ni su difusión y puesta a disposición desde un sitio ajeno al servicio TDR o al Repositorio Digital de la UB. No se autoriza la presentación de su contenido en una ventana o marco ajeno a TDR o al Repositorio Digital de la UB (framing). Esta reserva de derechos afecta tanto al resumen de presentación de la tesis como a sus contenidos. En la utilización o cita de partes de la tesis es obligado indicar el nombre de la persona autora.

WARNING. On having consulted this thesis you're accepting the following use conditions: Spreading this thesis by the TDX (www.tdx.cat) service and by the UB Digital Repository (diposit.ub.edu) has been authorized by the titular of the intellectual property rights only for private uses placed in investigation and teaching activities. Reproduction with lucrative aims is not authorized nor its spreading and availability from a site foreign to the TDX service or to the UB Digital Repository. Introducing its content in a window or frame foreign to the TDX service or to the UB Digital Repository is not authorized (framing). Those rights affect to the presentation summary of the thesis as well as to its contents. In the using or citation of parts of the thesis it's obliged to indicate the name of the author.

Faculty of Psychology
Department of Clinical Psychology and Psychobiology

Ph.D. Program

Clinical and Health Psychology

Doctoral Dissertation

Testing a New Comprehensive Model for Eating Disorder Symptoms and Academic Achievement Among Spanish and Iranian Undergraduates: The Relationships Between Parental, Developmental, External, and Cognitive Factors, Body Image Concerns, and Self-Efficacy

Ph.D. Student

Zahra Zabolipour

Dissertation Supervisor

Dr. Marta Ferrer García

December 2023



**UNIVERSITAT DE
BARCELONA**

Acknowledgments

Words cannot express my gratitude to my supervisor, Dr. Marta Ferrer Garcia, for her priceless patience and feedback. Her treasured assistance, guidance, and advice supported me through all the stages of my dissertation, without which this PhD would not have been possible.

I am extremely grateful to the “Agència de Gestió d’Ajuts Universitaris i de Recerca (AGAUR)” for the funding opportunity to conduct this research project.

I would like to express my deepest gratitude to the coordinator of the PhD program in Clinical and Health Psychology, Dr. José Gutierrez Maldonado, for his patience and faith in me.

Many thanks to all the professors of the Bachelor of Psychology at the faculty of psychology, especially Dr. Ana Adan Puig, Dr. Adolf Jose Dan Jarne Esparcia, and Dr. Julia Marquez, who facilitated the distribution and collection of questionnaires.

Special thanks to the Spanish and Iranian participants for their time and willingness to collaborate in this research.

I would like to extend my sincere thanks to my friend and old classmate, Mr. Mahdi Ghasemzadeh, for his great help in the process of data collection in Tehran, Iran.

Lastly, my endless appreciation goes out to my parents, Farzad and Fereshteh, my brother Parsa, and my best friend Faranak for their constant kindness, encouragement, support, and understanding throughout the duration of my studies abroad.

Table of Contents

LIST OF TABLES	V
LIST OF FIGURES	VI
ABSTRACT	1
RESUMEN	3
RESUM	5
CHAPTER 1: INTRODUCTION	7
1.1 Common Eating Disorders	8
1.1.1 Anorexia Nervosa	8
1.1.2 Bulimia Nervosa	11
1.1.3 Binge Eating Disorder	13
1.2 Risk Factors of Eating Disorders	14
1.2.1 Parenting Styles	15
1.2.2 Childhood Trauma	17
1.2.3 Weight-Related Teasing	18
1.2.4 Early Maladaptive Schemas	19
1.2.5 Sociocultural Attitudes Towards Appearance	23
1.2.6 Body Dissatisfaction.....	23
1.2.7 General Self-Efficacy	25
1.3 Eating Disorders in Undergraduate Students	26
1.4 Cultural Differences in Eating Disorders	28
1.5 Current Research	30
CHAPTER 2: RESEARCH OBJECTIVES AND HYPOTHESES	35
2.1 First Study	37
2.1.1 General Objectives	37
2.1.2 Particular Objectives.....	37
2.1.3 Research Questions.....	37
2.2 Second Study	38
2.2.1 General Objectives	38
2.2.2 Particular Objectives.....	38
2.2.3 Research Questions.....	38
2.3 Third Study	39
2.3.1 General Objectives	39
2.3.2 Particular Objectives.....	40
2.3.3 Research Hypotheses	41

2.3.4 Research Questions.....	43
CHAPTER 3: FIRST STUDY.....	44
3.1 Introduction.....	45
3.2 Methods.....	48
3.3 Results.....	49
3.3.1 Eating Disorder Symptoms and Academic Achievement.....	49
3.3.2 Risk Factors for Poor Academic Achievement.....	50
3.3.2.1 Parenting Style and Academic Achievement.....	50
3.3.2.2 Childhood Abuse and Academic Achievement.....	52
3.3.2.3 Weight-Related Teasing and Academic Achievement.....	54
3.3.2.4 Early Maladaptive Schemas and Academic Achievement.....	55
3.3.2.5 General Self-Efficacy and Academic Achievement.....	56
3.3.3 Interrelationships Between Common Risk Factors for Eating Disorders and Poor Academic Achievement.....	58
3.3.3.1 Variables Related to Early Maladaptive Schemas.....	58
3.3.3.2 Variables Related to Body Dissatisfaction.....	64
3.3.3.3 Variables Related to Self-Efficacy.....	74
3.4 Summary and Conclusion.....	81
CHAPTER 4: SECOND STUDY.....	90
4.1 Introduction.....	91
4.2 Methods.....	94
4.2.1 Participants.....	94
4.2.2 Procedure.....	95
4.2.3 Measures.....	95
4.3 Statistical Analysis.....	97
4.4 Results.....	98
4.4.1 Model Comparison.....	98
4.4.2 Internal Consistency and Test-Retest Reliability.....	104
4.4.3 Concurrent Validity.....	104
4.5 Discussion.....	106
CHAPTER 5: THIRD STUDY.....	111
5.1 Introduction.....	112
5.2 Methods.....	124
5.2.1 Participants.....	124
5.2.2 Procedure.....	124
5.2.3 Measures.....	125
5.3 Statistical Analysis.....	132
5.4 Results.....	135
5.4.1 Demographic Information and Descriptive Statistics.....	135
5.4.2 Inferential Statistics.....	140

5.4.2.1 Reflective Outer Model Evaluation	145
5.4.2.2 Formative Outer Model Evaluation	155
5.4.2.3 Inner Model Evaluation	161
5.4.2.4 Mediation Analysis	176
5.4.2.5 Moderation Analysis	189
5.5 Discussion	200
5.6 Theoretical and Practical Implications	235
5.7 Limitations.....	237
5.8 Suggestions for Future Research	238
CHAPTER 6: GENERAL SUMMARY, DISCUSSION, AND CONCLUSION	242
6.1 General Discussion.....	245
6.2 Strengths and Limitations	255
6.3 Implications for Future Research and Practice.....	257
6.4 Final Conclusion	258
REFERENCES	262
APPENDICES	303
Appendix A	304
Appendix B	305
Appendix C	319

List of Tables

Table 1.1 Early Maladaptive Schemas in Five Schema Domains and Related Unmet Needs.....	21
Table 3.1 Search Strategies in Databases.....	49
Table 4.1 Acceptable Fit Indices	98
Table 4.2 Fit Indices of Existing Models for Parental Bonding Instrument	101
Table 4.3 Internal Consistency and Test-Retest Reliability.....	104
Table 4.4 Pearson Correlation Coefficients between PBI and S-EMBU Subscales	105
Table 5.1 Descriptive Statistics of Demographic and Modeled Variables in the Spanish and Iranian Samples ...	136
Table 5.2 Construct Reliability and Validity in the Spanish and Iranian Models	147
Table 5.3 Construct Reliability and Validity in the Modified Spanish and Iranian Models.....	152
Table 5.4 Outer Weights Significance for Formative Indicators in the Spanish Model	156
Table 5.5 Outer Weights Significance for Formative Indicators in the Iranian Model	157
Table 5.6 VIF Criterion for the Formative Indicators in the Spanish and Iranian Models.....	159
Table 5.7 All Path Coefficients and their Significance in the Inner Spanish Model.....	162
Table 5.8 All Path Coefficients and their Significance in the Inner Iranian Model.....	165
Table 5.9 Q-Square Values for Endogenous Variables in the Spanish and Iranian Models	168
Table 5.10 R-Square Values for Endogenous Variables in the Spanish and Iranian Models	169
Table 5.11 F-Square Effect Size Values for the Spanish and Iranian Models	173
Table 5.12 Significant Mediations in the Spanish Model.....	177
Table 5.13 Significant Mediations in the Iranian Model.....	185
Table 5.14 Moderated Mediation Analysis for the Spanish and Iranian Models	197
Table 5.15 Simple Moderation Analysis in the Spanish and Iranian Models.....	198
Table C1 Variables, Related Abbreviations, and Items in the Spanish Model.....	319
Table C2 Variables, Related Abbreviations, and Items in the Iranian Model	320
Table C3 Outer Loadings in the Final Spanish Model	321
Table C4 Outer Loadings in the Final Iranian Model	325
Table C5 Fornell-Larcker Criterion of the Final Spanish Model	330
Table C6 Fornell-Larcker Criterion of the Final Iranian Model	331
Table C7 Cross-Loadings in the Final Spanish Model.....	332
Table C8 Cross-Loadings in the Final Iranian Model.....	336
Table C9 Heterotrait-Monotrait Ratio (HTMT) for the Final Spanish Model	340
Table C10 Heterotrait-Monotrait Ratio (HTMT) for the Final Iranian Model	341

List of Figures

Figure 1.1 Four Dimensions of Parenting and Possible Parenting Styles	17
Figure 1.2 Proposed Model for Eating Disorder Symptoms and Academic Achievement	33
Figure 3.1 Disordered Eating, Academic Achievement, and their Shared Risk Factors.....	58
Figure 3.2 Variables Related to Early Maladaptive Schemas	64
Figure 3.3 Variables Related to Body Dissatisfaction	73
Figure 3.4 Variables Related to Self-Efficacy	80
Figure 3.5 Academic Achievement Added to the Developing Research Model.....	82
Figure 3.6 Certain Risk Factors of Eating Disorders Connected to the Academic Achievement	84
Figure 3.7 Conceptualized Model for the Etiology of Eating Disorder Symptoms and Academic Achievement	88
Figure 4.1 SEM of the Final Four-Factor Model with the Standardized Estimates (Maternal Form)	102
Figure 4.2 SEM of the Final Four-Factor Model with the Standardized Estimates (Paternal Form)	103
Figure 5.1 Complete Proposed Research Model.....	116
Figure 5.2 A Section of the Proposed Model Related to the First General Objective	118
Figure 5.3 A Section of the Proposed Model Related to the Second General Objective	121
Figure 5.4 Algorithm for Model Evaluation	134
Figure 5.5 Statistical Model for the Spanish Sample.....	143
Figure 5.6 Statistical Model for the Iranian Sample.....	144
Figure 5.7 First-Stage Conditional Model.....	190
Figure 5.8 Second-Stage Conditional Model	190
Figure 5.9 First- and Second-Stage Conditional Model	191
Figure 5.10 Spanish Statistical Model with the Moderator (in Red)	194
Figure 5.11 Iranian Statistical Model with the Moderator (in Red).....	195
Figure 5.12 Slope Analysis for the Significant Simple Moderation.....	199

Abstract

Background: The prevalence of eating disorders (EDs) has more than doubled in the last few years, increasingly jeopardizing the academic achievement and future accomplishments of undergraduate university students, who are a particularly vulnerable group to EDs. Prior research has identified several key risk factors for the emergence of EDs, which have been highly recommended to be included together in future etiological models. Moreover, EDs have been found to be culture-bound, with a higher prevalence rate in certain cultural contexts. On the other hand, the Parental Bonding Instrument (PBI), a well-known measure for evaluating parenting styles as one of the most important risk factors for EDs, was previously validated in Spain over thirty years ago, in a very specific sample. **Objectives:** The objectives of this dissertation were to firstly establish the theoretical foundation for developing a novel comprehensive model for the etiology of EDs' symptoms and subsequent poor academic achievement; secondly, update the Spanish version of the PBI and assess its factorial structure; and thirdly, evaluate the proposed research model within two culturally diverse samples of undergraduate university students. Hence, three distinct studies were conducted, including a narrative literature review of the relationships between eating disorder symptoms, academic achievement, and the shared risk factors that influence both; PBI validation for the second time in Spain; and assessment of the hypothesized model, as well as examining the potential moderating effect of culture on the commonly confirmed mediations between two samples. **Method:** For the narrative review, related published articles were identified by searching in four databases: Scopus, Web of Science, ScienceDirect, and PsycINFO. Regarding the PBI validation, it was translated to Spanish, and 445 Spanish-Caucasian volunteer university students (79.3% female, 21.73 ± 3.48) completed both its maternal and paternal forms as well as the S-EMBU questionnaire. Confirmatory factor analysis was conducted for fourteen previously suggested models in the literature and their model fits were compared. Internal consistency, test-retest reliability, and concurrent validity of the new Spanish PBI were also assessed. In terms of the model evaluation in the third study, two samples of 367 Spanish (85.8% female, 20.64 ± 1.79) and 368 Iranian volunteer undergraduate students (84.5% female, 21.35 ± 1.81) answered eight questionnaires. Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to test the hypothesized model. **Results:** In the first study, reviewing existing academic literature supported the association between eating disorder symptoms and poor academic achievement as well as the interrelationships between their shared risk factors. In the second study, the four-factor structure of care, overprotection, autonomy, and indifference showed the best fit for the new Spanish PBI; the test-retest reliability and concurrent validity of this updated version were also confirmed. The third study confirmed the reliability and validity of both the Spanish and Iranian models; the dominant culture was revealed to be horizontal collectivism and horizontal individualism for the Spanish and Iranian samples, respectively; and four hypothesized mediations were found to be mutually supported: body dissatisfaction significantly mediated the effect of schema domains, weight-related teasing, and peer and media pressures on eating disorder symptoms, namely restraint, eating concern, and bulimia nervosa, and the impaired autonomy

schema domain significantly mediated the impact of childhood abuse on general self-efficacy. No significant moderated mediation was observed in any of the samples. **Conclusion:** In this dissertation, an elaborate model was formulated for risk factors contributing to disordered eating and poor academic achievement among the high-risk group of undergraduates. Similar mediations were revealed in both individualistic (Iranian) and collectivistic (Spanish) cultures. The proposed model, for the first time, revealed the sequential mediation of early maladaptive schemas and body dissatisfaction in the relationship between childhood abuse and EDs' symptoms; the mediating role of the disconnection schema domain in the relationship between childhood abuse and body dissatisfaction; and the mediating role of the impaired autonomy schema domain in the impacts of parenting style and childhood abuse on general self-efficacy. These findings, along with shared confirmed relationships in the Spanish and Iranian samples, have practical implications for prevention, early diagnosis, and treatment of EDs in both clinical and educational settings, and an additional 26 causal relationships have been suggested to be examined in future research endeavors.

Keywords: Eating disorder, Academic achievement, Risk factor, Parental Bonding Instrument, Undergraduate university student, Culture, Structural equation modeling

Resumen

Antecedentes: La prevalencia de los trastornos de conducta alimentaria (TCA) se ha más que duplicado en los últimos años, poniendo en peligro cada vez más el rendimiento académico y los logros futuros de los estudiantes universitarios, que son un grupo particularmente vulnerable a estos trastornos. Estudios previos han identificado varios factores de riesgo clave en la aparición de los TCA, y se ha recomendado encarecidamente incluirlos de manera conjunta en los modelos etiológicos futuros. Además, se sabe que los TCA están ligados a la cultura, con una tasa de prevalencia más alta en ciertos contextos culturales. Por otro lado, el Parental Bonding Instrument (PBI), una conocida medida para evaluar los estilos parentales, uno de los factores de riesgo más importantes para los TCA, fue validado en población española hace más de treinta años, en una muestra muy específica. **Objetivos:** Los objetivos de esta tesis fueron, en primer lugar, establecer la base teórica para desarrollar un modelo integral novedoso de la etiología de los síntomas de los TCA y el consiguiente rendimiento académico deficiente; en segundo lugar, actualizar la versión española del PBI y evaluar su estructura factorial; y, en tercer lugar, evaluar el nuevo modelo propuesto en dos muestras culturalmente diversas de estudiantes universitarios de pregrado. Por lo tanto, se realizaron tres estudios distintos, incluida una revisión narrativa de la literatura científica sobre las relaciones entre los síntomas de los trastornos de conducta alimentaria, el rendimiento académico, y los factores de riesgo compartidos que influyen en ambos; la validación de PBI por segunda vez en España; y la evaluación del nuevo modelo propuesto, así como examinar el posible efecto moderador de la cultura en las mediaciones confirmadas en ambas muestras. **Método:** Para la revisión narrativa, se identificaron artículos publicados relacionados con el tema de estudio mediante búsquedas en cuatro bases de datos: Scopus, Web of Science, ScienceDirect y PsycINFO. En cuanto a la validación del PBI, se tradujo al español y se administró a 445 estudiantes universitarios voluntarios de nacionalidad española y caucásicos (79,3% mujeres, $21,73 \pm 3,48$). Los participantes completaron tanto la versión materna como la paterna del PBI, así como el cuestionario S-EMBU. Se realizó un análisis factorial confirmatorio para catorce modelos sugeridos en estudios previos y se compararon sus ajustes de modelo. También se evaluó la consistencia interna, la fiabilidad test-retest y la validez concurrente del nuevo PBI español. En cuanto a la evaluación del modelo, en el tercer estudio, dos grupos, uno de 367 estudiantes universitarios voluntarios españoles (85,8% mujeres, $20,64 \pm 1,79$) y, el otro, formado por 368 estudiantes iraníes (84,5% mujeres, $21,35 \pm 1,81$) respondieron ocho cuestionarios. Se empleó el modelado de ecuaciones estructurales de mínimos cuadrados parciales (PLS-SEM) para probar el modelo propuesto. **Resultados:** En el primer estudio, la revisión de la literatura científica existente apoyó la asociación entre los síntomas del TCA y el bajo rendimiento académico, así como las interrelaciones entre los factores de riesgo compartidos. En el segundo estudio, la estructura de cuatro factores: cuidado, sobreprotección, autonomía e indiferencia mostró tener el mejor ajuste para el nuevo PBI español; También se confirmó la confiabilidad test-retest y la validez concurrente de esta versión actualizada. El tercer estudio confirmó la fiabilidad y validez de los modelos español e iraní; la cultura dominante en la muestra española fue el colectivismo horizontal y, en la población iraní, el individualismo horizontal. se confirmaron en ambos grupos cuatro de

las mediaciones hipotetizadas: la insatisfacción corporal medió significativamente en el efecto de los esquemas de dominio, las burlas relacionadas con el peso y las presiones de los pares y de los medios sobre los síntomas del TCA, a saber, la restricción, la preocupación por la comida y la bulimia nerviosa, y el dominio del esquema de autonomía deteriorada medió significativamente en el impacto del abuso infantil en la autoeficacia general. No se observó moderación significativa de la cultura en ninguna de las muestras. **Conclusión:** En esta investigación, se propuso un modelo comprensivo de los factores de riesgo que contribuyen tanto al desarrollo de los trastornos de la conducta alimentaria como al bajo rendimiento académico en estudiantes universitarios. Se encontraron mediaciones similares tanto en la cultura individualista (iraní) como en la colectivista (española). El modelo propuesto, por primera vez, reveló la existencia de una mediación secuencial de los esquemas desadaptativos tempranos y la insatisfacción corporal en la relación entre el abuso infantil y los síntomas de los TCA; el papel mediador del dominio del esquema de desconexión en la relación entre abuso infantil e insatisfacción corporal; y el papel mediador del dominio del esquema de autonomía deteriorada en los impactos del estilo de crianza y el abuso infantil en la autoeficacia general. Estos hallazgos, junto con las relaciones confirmadas compartidas en las muestras española e iraní, tienen implicaciones prácticas para la prevención, el diagnóstico temprano y el tratamiento de los TCA tanto en entornos clínicos como educativos, y se sugiere examinar 26 relaciones causales adicionales en futuras investigaciones.

Palabras clave: Trastorno de conducta alimentaria, Rendimiento académico, Factor de riesgo, Parental Bonding Instrument, Estudiante universitario de pregrado, Cultura, Modelo de ecuaciones estructurales

Resum

Antecedents: La prevalença dels trastorns de conducta alimentària (TCA) s'ha més que duplicat en els darrers anys, posant en perill cada vegada més el rendiment acadèmic i els èxits futurs dels estudiants universitaris, que són un grup particularment vulnerable a aquests trastorns. Estudis previs han identificat diversos factors de risc que resulten clau per a l'aparició dels TCA i s'ha recomanat encaridament incloure'ls conjuntament en els models etiològics futurs. A més a més, és ben sabut que els TCA estan lligats a la cultura, amb una taxa de prevalença més alta en certs contextos culturals. D'altra banda, el Parental Bonding Instrument (PBI), una coneguda mesura per avaluar els estils parentals, un dels factors de risc més importants per als TCA, va ser validat en població espanyola fa més de trenta anys, en una mostra molt específica. **Objectius:** Els objectius d'aquesta tesi foren, en primer lloc, establir la base teòrica per desenvolupar un model integral nou per a l'etiologia dels símptomes dels TCA i el consegüent rendiment acadèmic deficient; en segon lloc, actualitzar la versió espanyola del PBI i avaluar-ne l'estructura factorial; i en tercer lloc, avaluar el nou model proposat dins de dues mostres culturalment diverses d'estudiants universitaris de pregrau. Per tant, es van fer tres estudis diferents, inclosa una revisió narrativa de la literatura sobre les relacions entre els símptomes dels TCA, el rendiment acadèmic, i els factors de risc compartits que influeixen en tots dos; la validació de PBI, per segona vegada a Espanya; i l'avaluació del model proposat, així com l'estudi del possible efecte moderador de la cultura en les mediacions confirmades en les dues mostres. **Mètode:** Per a la revisió narrativa, es van identificar articles publicats relacionats amb el tema d'estudi mitjançant cerques a quatre bases de dades: Scopus, Web of Science, ScienceDirect i PsycINFO. Pel que fa a la validació del PBI, es va traduir a l'espanyol i es va administrar a 445 estudiants universitaris voluntaris de nacionalitat espanyola i caucàsics (79,3% dones, $21,73 \pm 3,48$). Els participants van completar tant la versió materna com la paterna del PBI, així com el qüestionari S-EMBU. Es va realitzar una anàlisi factorial confirmatòria per a catorze models suggerits en estudis previs i es van comparar els seus ajustos al model. També es van avaluar la consistència interna, la fiabilitat test-retest i la validesa concurrent del nou PBI espanyol. Pel que fa a l'avaluació del model proposat al tercer estudi, dues mostres de 367 estudiants universitaris voluntaris espanyols (85,8% dones, $20,64 \pm 1,79$) i 368 iranians (84,5% dones, $21,35 \pm 1,81$) van respondre vuit qüestionaris. Es va utilitzar el model d'equacions estructurals de mínims quadrats parcials (PLS-SEM) per provar el model hipotetitzat. **Resultats:** Al primer estudi, la revisió de la literatura científica existent va recolzar l'associació entre els símptomes del TCA i el baix rendiment acadèmic, així com les interrelacions entre els factors de risc compartits. Al segon estudi, l'estructura de quatre factors: cura, sobreprotecció, autonomia i indiferència va mostrar el millor ajust per al nou PBI espanyol; també es va confirmar la confiança test-retest i la validesa concurrent d'aquesta versió actualitzada. El tercer estudi va confirmar la fiabilitat i validesa dels models espanyol i iranià proposats; la cultura dominant a la mostra espanyola fou el col·lectivisme horitzontal i, a la mostra iraniana, l'individualisme horitzontal; quatre de les mediacions hipotetitzades es van confirmar en ambdues mostres: la insatisfacció corporal va mediar significativament l'efecte dels esquemes de domini, les burles relacionades amb el pes i les pressions dels parells i dels mitjans sobre els símptomes del TCA, és

a dir, la restricció, la preocupació pel menjar i la bulímia nerviosa, i el domini de l'esquema d'autonomia deteriorada va mediar significativament l'impacte de l'abús infantil a l'autoeficàcia general. No es va observar efecte moderador significatiu de la cultura a cap de les mostres.

Conclusió: En aquesta investigació es proposà un model comprensiu dels factors de risc que contribueixen als trastorns de conducta alimentària i al rendiment acadèmic baix en estudiants universitaris. Es van trobar mediacions similars tant a la cultura individualista (iraniana) com a la col·lectivista (espanyola). El model proposat, per primer cop, va mostrar l'existència d'una mediació seqüencial dels esquemes desadaptatius primerencs i la insatisfacció corporal en la relació entre l'abús infantil i els símptomes dels TCA; el paper mediador del domini de l'esquema de desconnexió a la relació entre abús infantil i insatisfacció corporal; i el paper mediador del domini de l'esquema d'autonomia deteriorada en els impactes de l'estil de criança i l'abús infantil a l'autoeficàcia general. Aquestes troballes, juntament amb les relacions confirmades compartides per les mostres espanyola i iraniana, tenen implicacions pràctiques per a la prevenció, el diagnòstic primerenc i el tractament dels TCA tant en entorns clínics com educatius, i es suggereix que s'examinin 26 relacions causals addicionals en futures investigacions.

Paraules clau: Trastorn de conducta alimentària, Rendiment acadèmic, Factor de risc, Parental Bonding Instrument, Estudiant universitari de pregrau, Cultura, Modelatge d'equacions estructurals

Chapter 1: Introduction

Studies on the mortality rate of eating disorders have revealed a five- to seven-fold increased risk of death in sufferers compared to the general population (Arcelus et al., 2011; Iwajomo et al., 2021; Keshaviah et al., 2014). Eating disorders (EDs) are long-term abnormalities in eating or eating-related behaviors characterized by negatively transformed food intake or absorption, and significantly impaired physical or psychosocial health (American Psychiatric Association (APA), 2013). These disorders affect males and females as well as all age groups; young, middle-aged, and elderly people (Conceição et al., 2017; Hadjigeorgiou et al., 2018; Jenkins & Price, 2018; Lapid et al., 2010; Mangweth-Matzek et al., 2014, 2016; Mangweth-Matzek & Hoek, 2017; Midlarsky et al., 2018; Reas & Stedal, 2015; Thompson & Bardone-Cone, 2019). In the fifth edition of the diagnostic and statistical manual of mental disorders (DSM-5), there are diagnostic criteria for six distinct types of eating disorders: pica, rumination disorder, avoidant/restrictive food intake disorder (ARFID), anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder (BED) (APA, 2013), among which, anorexia nervosa, bulimia nervosa, and binge-eating disorder are the most prevalent (APA, 2013; Kessler et al., 2013). In the sections that follow, most common eating disorders and their main risk factors will be discussed.

1.1 Common Eating Disorders

1.1.1 Anorexia Nervosa

Self-induced starvation was documented as religious fasting for the first time during the Hellenistic period. Moreover, St Catherine of Siena (1347-1380) and Mary Queen of Scots (1542-1587) were two notable historical figures who fasted and were deemed to suffer from anorexia nervosa. Nevertheless, the first medical report of anorexia nervosa was published in 1689 by the English physician Richard Morton. In his book "nervous consumption", he described male and

female patients who did extreme fasting and suffered from loss of appetite but no diagnosable physical illness. After nearly two centuries, in 1873, the Parisian clinician Ernest-Charles Lasègue and the London physician Sir William Withey Gull presented the first description of anorexia nervosa by publishing "anorexie hystérique" and "anorexia hysterica" respectively, in the same year. Gull was one of Queen Victoria's physicians, and his article was the first to use the term "anorexia nervosa", which gained widespread acceptance in the medical field. Lasègue and Gull also identified some criteria, such as severe weight loss, constipation, restlessness, amenorrhea, and no evidence of underlying organic pathology, that are still considered valid for this condition. In 1914, German pathologist Morris Simmonds discovered pituitary gland lesions in some patients being very thin, and anorexia nervosa became strongly connected with what was called "Simmonds' disease" or "pituitary cachexia". However, the groundbreaking work of German American psychiatrist Hilde Bruch changed everything after 1960s. She focused on the patients' low self-esteem and distorted body image. As a result, the relentless pursuit of thinness and the body image disturbance were added to the original clinical picture described by Lasègue and Gull. Accordingly, anorexia nervosa gained public interest in the late twentieth century as it was no longer a rare and unknown clinical condition (DeWitt & Attia, 2017; Vandereycken, 2002).

Since the publication of various versions of diagnostic and statistical manual of mental disorders (DSM), the diagnosis of anorexia nervosa has been the subject to numerous controversies and changes. In the DSM III, AN was defined as a 25% weight loss with no amenorrhea criterion. It was also stated that the weight loss was not caused by a medical condition. The amenorrhea criterion was then added to the DSM III-R. Later, in DSM-IV, the weight criterion was changed to a 15% weight loss. In DSM-IV-TR, the criteria for AN diagnosis became comprehensive including a refusal to maintain normal weight, weighing below 85% of the ideal body weight, an

intense fear of gaining weight, body image disturbance or a denial about the seriousness of the low weight, and an absence of three menstrual cycles within a row. These criteria, however, sparked heated debate. Starting with the issue of "ideal" weight, it was suggested that a cutoff point of less than 85% of the ideal body weight was problematic because it did not define how an ideal weight was determined. Second, it was not clear how a "refusal" to maintain a "normal" weight could be inferred. Third, determining an "intense fear" of gaining weight was difficult because many patients did not admit suffering from a fear of weight gain for various reasons such as denial, shame, and lack of insight. Finally, the most contentious criterion was amenorrhea, which was frequently not met in subthreshold cases and excluded those with a more recent onset of AN or adolescents with irregular menstrual cycles. Moreover, this criterion was inapplicable to prepubescent girls, postmenopausal women, women who never had regular periods or were on oral contraceptives, and men. As an alternative to approving the existence of the fear of weight gain, the fifth DSM identified persistent behavior that interferes with weight gain. Therefore, the patient's behavior will be a better guide than self-reports because many anorectic individuals do not openly talk about their symptoms (Moskowitz & Weiselberg, 2017). According to DSM-5, the following three criteria must be met so that an individual be diagnosed with anorexia nervosa:

- 1) Restriction of energy intake leading to a significant low body weight in the context of age, sex, developmental trajectory, and physical health. Significantly low body weight is defined as a weight that is less than minimally normal or, for children and adolescents, less than that minimally expected,
- 2) Intense fear of gaining weight or becoming fat or persistent behavior that interferes with weight gain, even at a significantly low weight,
- 3) Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight (APA, 2013).

According to recent research, up to 4 percent of females and 0.3 percent of males suffer from anorexia nervosa during their lifetime. Anorexia nervosa is also becoming more prevalent in younger girls under 15 years old. Nevertheless, its overall incidence rate has remained relatively stable over the last decades (Van Eeden et al., 2021a).

On the other hand, the standard mortality rate for anorexia nervosa is more than five times that of the general population when age and gender are matched. It has also been reported that the death rate of individuals with anorexia nervosa is the same as or even higher than that of people with schizophrenia (Fichter & Quadflieg, 2016; Iwajomo et al., 2021).

1.1.2 Bulimia Nervosa

Bulimia nervosa was initially discussed by Gerald Russell, who described it as an "ominous variant" of anorexia nervosa in 1979. The term "bulimia" was firstly included in DSM-III, in 1980, but the emphasis was merely on the occurrence of binge eating episodes. Then, with the publication of DSM-III-R, the criteria also included compensatory behaviors and overconcern about weight and shape. Subsequently, DSM-IV was published which introduced a wide range of diagnostic criteria for bulimia nervosa: first, the definition of binge eating was revised to include the consumption of a "clearly" significant amount of food and the subjective experience of a lack of control over eating. Second, it was stated that binge eating must occur with compensatory behaviors at least twice a week for three months. Third, the diagnosis of BN in DSM-IV required a distortion of shape and weight. Fourth, it was proposed that people with bulimic symptoms who also met the criteria for anorexia nervosa should not be given the concurrent diagnosis of bulimia nervosa but the diagnosis of the binge-eating/purging subtype of anorexia nervosa. Finally, DSM-IV added a new classification of purging and non-purging bulimia nervosa. The purging subtype

was characterized by self-induced vomiting and misuse of laxatives/diuretics, while non-purging included fasting and excessive exercise.

Then, in 2013, DSM-5 was published, which reduced the average frequency of binge eating and compensatory behaviors to once a week for three months. This change was made to broaden the criteria and decrease the prevalence of eating disorder diagnoses that were not otherwise specified or were unspecified. Due to the dearth of data supporting the validity of purging/non-purging subtypes, this classification was also removed in DSM-5 (Peterson et al., 2017). According to DSM-5, the following criteria must be met for someone to be diagnosed as having bulimia nervosa:

- 1) Recurrent episodes of binge eating; an episode of binge eating is characterized by both of the following characteristics:
 - a. Eating, in a discrete period (e.g., within any 2-hour period), an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances.
 - b. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or cannot control what or how much is eating).
- 2) Recurrent inappropriate compensatory behaviors to prevent weight gain, such as self-induced vomiting, misuse of laxatives, diuretics, or other medications, fasting, or excessive exercise.
- 3) The binge eating and inappropriate compensatory behaviors both occur, on average, at least once a week for 3 months.
- 4) Self-evaluation is unduly influenced by body shape and weight.
- 5) The disturbance does not occur exclusively during the episodes of anorexia nervosa (APA, 2013).

Recent studies have shown that the incidence rate of bulimia nervosa has decreased over time. Nevertheless, it usually peaks between the ages of 15 and 29 years old. The lifetime prevalence of BN has been reported up to 3% in females and over 1% in males. The mortality risk of bulimia nervosa is five times higher than that of general population (Van Eeden et al., 2021b).

1.1.3 Binge Eating Disorder

In 1959, Albert Stunkard recognized obese individuals who experienced recurrent binge eating episodes without purging. Therefore, he was the first person who identified the symptoms of binge eating disorder (BED). However, it took four decades for BED to be officially introduced as a disease. Hence, when DSM-IV was published, BED was included under the *Eating Disorders Not Otherwise Specified* group as a provisional diagnosis. The core criterion of BED diagnosis was binge-eating episodes occurring at least two times per week for six months. However, due to insufficient evidence supporting BED's diagnostic criteria and the possibility of overlap with bulimia nervosa, this inclusion became debatable. Following the publication of DSM-5, the diagnostic criteria for BED were revised. The objective binge-eating episodes required for a diagnosis of BED had to occur at least once per week for three months. Therefore, DSM-5 led to an increase in the prevalence of BED and a decrease in the number of EDNOS cases (Hilbert, 2017). According to DSM-5, the following criteria must be met for someone to be diagnosed with binge eating disorder:

- 1) Recurrent episodes of binge eating; an episode of binge eating is characterized by both of the following characteristics:
 - a. Eating in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than what most people would eat in a similar period of time under similar circumstances.
 - b. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or cannot control what or how much is eating).
- 2) The binge-eating episodes are associated with three (or more) of the following:
 - a. Eating much more rapidly than normal.
 - b. Eating until feeling uncomfortably full.
 - c. Eating large amounts of food when not feeling physically hungry.
 - d. Eating alone because of feeling embarrassed by how much one is eating.

- e. Feeling disgusted with oneself, depressed, or very guilty afterward.
- 3) Marked distress regarding binge eating is present.
- 4) The binge eating occurs, on average, at least once a week for 3 months.
- 5) The binge eating is not associated with the recurrent use of inappropriate compensatory behavior as in bulimia nervosa and does not occur exclusively while bulimia nervosa or anorexia nervosa (APA, 2013).

The worldwide incidence rate of binge eating disorder is 1.5% in women and 0.3% in men. Lifetime BED prevalence is 0.6 –1.8 percent in adult women, 0.3 – 0.7 percent in adult men, and 0.2 – 6.1 percent in adolescents. Despite the lack of data regarding the mortality rate of BED, estimations have revealed that its standard mortality rate is 1.5 – 1.8 (Keski-Rahkonen, 2021).

1.2 Risk Factors of Eating Disorders

Various theories have been developed about eating disorders, each of which investigates their etiology and treatment from its specific point of view; bio-psychiatric, cognitive-behavioral, feminist, psychodynamic, and sociocultural theories are all well-known in this field (Smolak & Levine, 2015a). Likewise, studies investigating the etiology of eating disorders have identified several risk factors. Accordingly, a systematic review of all existing models for the etiology of eating disorders has revealed that negative family interactions, childhood traumas, weight-related teasing, maladaptive cognitions, media and peer pressures to be thin, body dissatisfaction, and low self-esteem are crucial risk factors for the development of eating disorder symptoms (Pennesi & Wade, 2016a).

1.2.1 Parenting Styles

Adverse parenting styles have been recently identified as the central family-related negative life experience in adults with eating disorders. In other words, patients with eating disorders typically report that, during childhood, they have received less warmth and affection but more control and rejection from their parents (Grogan et al., 2020; Monteleone et al., 2020). In accordance with this finding, studies have consistently reported that people with eating disorders experience different parenting styles compared to healthy control groups (Bulik et al., 2000; De Panfilis et al., 2003; Deas et al., 2011; Fassino et al., 2010; Gutzwiller et al., 2003; Swanson et al., 2010; Tetley et al., 2014).

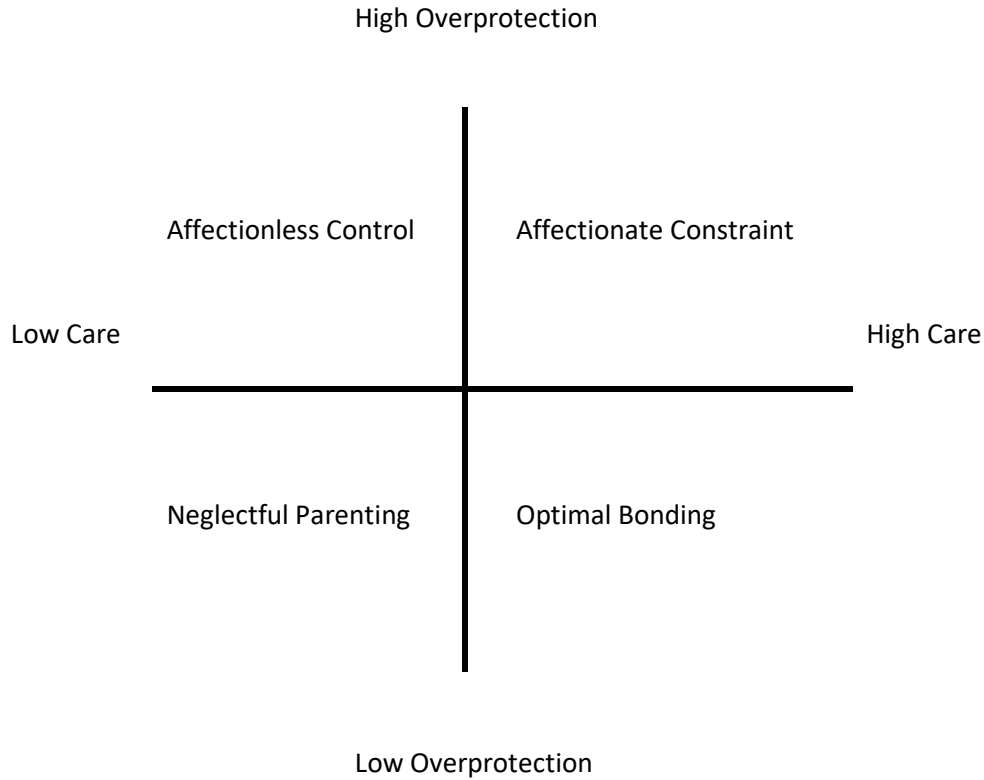
According to Darling and Steinberg (1993a, p. 493), parenting style is “a constellation of attitudes toward the child that is communicated to the child and creates an emotional climate in which the parent's behaviors are expressed”. Focusing on the parent-child relationship and employing factor analysis technique during the 1930s and 1960s, researchers came up with two fundamental dimensions of parenting: parental warmth and parental control. Later, in the mid-1960s, Diana Baumrind suggested three main parenting styles based on different combinations of these dimensions: 1) Authoritarian parenting, 2) Permissive/Indulgent parenting, and Authoritative parenting (Power, 2013). Authoritarian parents impose rigid control on their children and are not connected or responsive. In contrast, permissive parents are affectionate without being demanding or controlling. Authoritative parents, however, value their children’s autonomy and independence while exercising control over them (Baumrind, 1971). The neglectful parenting style was later included in Baumrind's classification by Baumrind, Maccoby, and Martin. A lack of warmth and responsiveness in addition to having expectations from children, describes a neglectful parenting style (Čablová et al., 2014a).

Based on the dimensions of warmth and overprotection (control), another conceptualization of parenting style was proposed by Parker and colleagues (1979a) while developing the Parental Bonding Instrument (PBI). PBI is a commonly used measure for evaluating how children perceive their parents' rearing styles. They called the previously known dimensions of warmth and control as "care" and "overprotection", respectively.

Parental care generally refers to the warmth, empathy, and connectedness that parents provide to their children while parental overprotection means parents being excessively intrusive and controlling (Li & Zheng, 2021; Ngai, 2015). The interaction between these two dimensions of care and overprotection results in the emergence of four parenting styles (see Figure 1.1): optimal bonding, affectionless control, affectionate constraint, and neglectful parenting. The optimal bonding is defined as having a high level of care and a low level of overprotection, whereas affectionless control refers to a low level of care and a high level of overprotection. On the other hand, affectionate constraint is characterized by high care and overprotection, while neglectful parenting refers to low parental care and overprotection (Parker et al., 1979b).

Figure 1.1

Four Dimensions of Parenting and Possible Parenting Styles



1.2.2 Childhood Trauma

An umbrella review of meta-analyses on the risk factors of eating disorders strongly concluded that early traumatic events such as abuse and teasing play a significant role in the development of eating disorders (Solmi et al., 2020). Childhood trauma refers to “the experience of an event by a child that is emotionally distressful” (Janiri et al., 2020, p. 4). Five different types of traumas during childhood are: physical neglect, emotional neglect, physical abuse, emotional abuse, and sexual abuse (Bernstein et al., 1994).

Physical neglect occurs when fundamental physical needs are not met (Cort et al., 2011). Emotional neglect happens when parents are emotionally unavailable and unresponsive and have no interaction with their child (Chen et al., 2021). Physical abuse takes place when a caregiver's actions lead to the child's injury (Hinds & Giardino, 2017). Emotional abuse is defined as "a type of abuse in which a caregiver degrades, corrupts, berates, belittles, rejects, threatens, ignores, exploits, assaults, spurns and/or terrorizes a child in a repeated pattern" (Weymouth & Howe, 2011, p. 566). Finally, sexual abuse requires four criteria to confirm its occurrence:

- 1) The abused person is developmentally a child, or under the legal age of adulthood, or otherwise considered a child by society's norms.
- 2) The child is unable to consent due to developmental stage or lack of capacity or can consent but did not.
- 3) The act was either to seek physical or mental sexual gratification for the abuser or another person, or it was legitimately experienced as a sexual act by the child.
- 4) The act occurs within a power relationship where the victim is in an unequal position, the child's vulnerability is taken advantage of, and there is no conscious consent (Mathews & Collin-Vézina, 2019).

1.2.3 Weight-Related Teasing

The concept of "teasing" is comprised of three fundamental components of aggression or challenge, play, and ambiguity, which are required to convey what we mean by this word. In other words, various combinations of these three elements result in distinct forms of teasing. Therefore, it can be said that teasing is a form of communication with multiple facets as it can be utilized in a cruel and demeaning or playful and humorous way (Mills & Carwile, 2009).

Research has shown that weight-related teasing can result in body dissatisfaction, restraint, and bulimic symptoms (Menzel et al., 2010). Moreover, individuals with eating disorders, especially

those with bulimia nervosa and binge-eating disorder, are two- to three-fold more likely to experience teasing about their appearance before the onset of eating disorders (Lie et al., 2019).

1.2.4 Early Maladaptive Schemas

Most of the research on maladaptive cognitions has been conducted within the framework of schema theory (Gilbert et al., 2013). Research has indicated that early maladaptive schemas directly influence the development of body image concern (Moghadam et al., 2021a) and eating disorders (De Paoli et al., 2017). Moreover, individuals with eating disorders have been found to report significantly higher scores on a wide range of early maladaptive schemas (Maher et al., 2022).

The term "schema" refers to a framework or pattern that organizes a complex set of events or stimuli. When it comes to computer science, education, and philosophy, schema has long been a prevalent word. However, it was first used in psychology by Piaget, who was studying the stages of cognitive development in children. Later, Beck adopted this term and applied it in his theory of cognitive therapy (Rafaeli et al., 2011).

As a trained cognitive therapist in Beck's school, Jeffrey Young noticed that some patients did not respond to short-term treatment approaches. With his attention being drawn to these patients, he decided to focus on their characteristics and develop the most appropriate treatment that meets their needs (Edwards & Arntz, 2012). As a result, he extended Beck's schema model and integrated concepts from theories of attachment, gestalt, object relations, constructivism, cognitive-behavioral therapy, as well as psychoanalytic schools into a new approach and called it "Schema Therapy" (Esmaeilian et al., 2019). Although schema therapy was initially developed to treat patients suffering from personality disorders, its application has been broadened in recent years to

include the evaluation and treatment of a wide range of mental health problems such as mood, anxiety, and eating disorders (Hawke & Provencher, 2011; Simpson & Smith, 2019).

An early maladaptive schema is “a broad, pervasive theme or pattern comprised of memories, emotions, cognitions, and bodily sensations regarding oneself and one’s relationships with others developed during childhood or adolescence, elaborated throughout one’s lifetime, and dysfunctional to a significant degree” (Young et al., 2003a, p. 7). When the interaction between a child's early life experiences (toxic ones) and his/her emotional temperament results in the frustration of core emotional needs, early maladaptive schemas are formed. According to Young’s theory, there are five universal core emotional needs: 1) Secure attachments to others (safety, stability, nurturance, and acceptance); 2) Autonomy, competence, and a sense of self; 3) Freedom to express valid needs and emotions; 4) Spontaneity and play; and 5) Realistic limits and self-control. He identified 18 maladaptive schemas and classified them into 5 domains based on mentioned primary unmet needs.

Early maladaptive schemas are characterized by their resistance to change and dimensionality; the latter means they vary in terms of their severity and pervasiveness. In adulthood, schemas are activated by life events that are unconsciously perceived as resembling traumatic childhood experiences (Young et al., 2003b). Table 1.1 lists all domains, their schemas, and related unmet needs. It also gives more detailed explanations of each maladaptive schema (Arntz & Jacob, 2017; Nicol et al., 2021; Ostovar et al., 2021; Renner et al., 2012; Rodrigues et al., 2019).

Table 1.1*Early Maladaptive Schemas in Five Schema Domains and Related Unmet Needs*

Schema Domains	Explanations	Unmet Needs
First Domain: Disconnection and Rejection	This domain is concerned with attachment issues and in all its schemas an individual's expectation that "any close relationship will end soon" is mutual.	
Mistrust/Abuse	The believe of being intentionally hurt, humiliated, cheated, lied to, manipulated, or abused by others.	
Abandonment/Instability	Perceiving significant others as unreliable or unstable.	Secure attachment to others
Emotional Deprivation	The expectation that one's need for emotional support, empathy or protection will not be met.	
Defectiveness/Shame	The feeling of being unlovable, undesirable, inferior, or invalid.	
Social Isolation/Alienation	The feeling of being distinct from others, of being alone, isolated, and not being a part of a community.	
Second Domain: Impaired Autonomy and Performance	Schemas in this domain are associated with an individual's belief of being unable to perform and survive independently.	
Dependence/Incompetence	The belief that one is unable to take care of oneself and handle daily responsibilities without others' help.	
Vulnerability to Harm/Illness	Exaggerated fear of an unavoidable medical, emotional, or external catastrophe at any moment.	Autonomy, competence, and sense of identity
Enmeshment/Undeveloped Self	Excessive emotional connection to significant others at the expense of failing to develop one's own identity.	
Failure	Perception of inadequacy in comparison to peers and failure or impending failure in areas of achievement.	
Third Domain: Impaired Limits	Schemas in this domain are connected with difficulty accepting social norms and a lack of self-discipline.	
Entitlement/Grandiosity	Belief that one is superior to others and entitled to special rights and privileges.	Realistic limits and self-control
Insufficient Self Control/Self-Discipline	Inability to maintain self-control and tolerate frustration in order to achieve personal goals.	
Fourth Domain: Other-Directedness	This domain's schemas are about focusing on the needs and desires of others in order to gain endorsement and create an emotional bond.	

Schema Domains	Explanations	Unmet Needs
Self-Sacrifice	Excessive emphasis on meeting others' needs at the expense of one's own happiness.	Freedom to express valid needs and emotions
Subjugation	The perception that one's own needs are unimportant or invalid, and that others will become enraged if one's own needs are prioritized.	
Approval Seeking/Recognition Seeking	An excessive focus on gaining approval or attention from others due to the belief that one is only valuable if others like or respect him/ her.	
Fifth Domain: Overvigilance and Inhibition	This domain is characterized by the suppression of emotions and impulses, as well as high performance standards.	Spontaneity and play
Negativity/Pessimism	A lifetime preoccupation with the negative aspects of life and disregarding the positive aspects.	
Emotional Inhibition	Excessive inhibition of emotions, feelings, and spontaneous action in order to avoid receiving negative feedback from others or experiencing shame.	
Unrelenting Standards	Constantly striving for perfection in order to avoid being criticized.	
Punitiveness	Belief that in the case of making an error, people should be severely punished.	

1.2.5 Sociocultural Attitudes Towards Appearance

In recent years, there has been a growing number of publications focusing on the impact of mass media and peer groups on unhealthy eating behaviors (Al-sheyab et al., 2018; Doumit et al., 2018; Gerbasi et al., 2014; Howard et al., 2020; Jankauskiene & Baceviciene, 2022; Martínez-González et al., 2003; Mendes et al., 2017; Meyer & Gast, 2008; Montoya et al., 2015; Sanchez-Ruiz et al., 2017a; Scime et al., 2006; Tremblay & Lariviere, 2009; Wright & Pritchard, 2009).

Findings indicate that the pressure from peer groups and the media regarding appearance ideals predicts the development of eating disorder symptoms and body dissatisfaction in undergraduate students (Howard et al., 2020; Sanchez-Ruiz et al., 2017b). A recent meta-analysis has also confirmed that social media messages about appearance ideals may cause body dissatisfaction (De Valle et al., 2021), which itself is a key feature of disordered eating (Dakanalis, Zanetti, et al., 2015; Stice et al., 2017; Uchôa et al., 2019), as well as one of its fundamental risk factors (Pennesi & Wade, 2016b).

1.2.6 Body Dissatisfaction

Body dissatisfaction is referred to “a person’s negative thoughts and feelings about his or her body” (Grogan, 2016, p. 4). Four dimensions of body image has been identified: evaluative, perceptual, cognitive-affective, and motivational body image. The evaluative dimension of body image involves self-judgement or in other words, being satisfied or dissatisfied with one’s own body; the perceptual dimension refers to disruptions in an individual's sensory perception of their body, such as the estimation of visual body size; the cognitive-affective dimension includes maladaptive cognitions and emotions that may be experienced towards the body, such as fear of gaining weight or being occupied with weight or body shape; and lastly, the motivational

dimension is characterized by a desire for a particular body type, such as a certain size or a flat stomach (Prnjak et al., 2022).

Based on a recently proposed multidimensional model, the development of body image in adolescence is influenced by various factors including personal perception of one's own body image, social influences from peers and family, and environmental factors such as school and media-specific ideals. These contributors, together, make an adolescent reassess their body image, and this process of reevaluation has a pivotal role in shaping the meaning of body image for individuals. Self-reevaluation, along with beliefs and emotions such as self-efficiency, as well as barriers and obstacles, leads to body image satisfaction or dissatisfaction. Therefore, as a result of the acceptance or rejection of body image, adolescents may utilize self-management techniques and strategies, such as dietary modifications and physical activity, in order to attain an ideal weight or image (Tort-Nasarre et al., 2021). Moreover, existing research has demonstrated a connection between body image and key personality traits; in other words, regardless of actual body weight, individuals with elevated levels of neuroticism and diminished levels of extraversion and conscientiousness are more likely to experience dissatisfaction with their bodies (Allen & Robson, 2020).

A recently published meta-analysis on the normal process of body image development has revealed a dearth of relevant and reliable data concerning this matter between the age range of 6 to 10 years. However, among female individuals, while transitioning to subsequent stages of life, there is a decline in body image between the ages of 10 and 16. Then, from 16 to 24 years old, there is an upward trend in body image reaching its pinnacle at the age range of 22-24. After the age of 30, although the body image is worsened, women's level of concern appears to be diminished over this timeframe. In terms of body image among male individuals, an improvement

has been detected in body image between the ages of 10 and 16, which subsequently shifts into a consistent pattern within the 16 to 24 age range. Afterwards, at the stage of adulthood and beyond the age of 30, there is a decline in men's body image. Therefore, it may be inferred that both males and females are susceptible to experiencing diminished body image during their adulthood (Lacroix et al., 2023).

As an aspect of body dissatisfaction, drive for thinness can predict mental health problems, such as generalized anxiety disorder and low self-esteem in both male and female college students (Artyukhov et al., 2022). Furthermore, previous research has indicated that individuals who are dissatisfied with their bodies are more likely to develop low self-efficacy (Lodewyk & Sullivan, 2016).

The prevalence of body dissatisfaction among 18-30-year-old individuals has been reported to be 63.5 – 71.7% between 2017 and 2022, with the highest rate occurring in 2021 (Jiménez-Limas et al., 2022).

1.2.7 General Self-Efficacy

As a subcomponent of the self-esteem construct, researchers studying disordered eating have become interested in self-efficacy in both its general and domain-specific manifestations (Ackard et al., 2011; Bardone-Cone et al., 2006; Keshen et al., 2017; MacNeil et al., 2012). Self-efficacy refers to individuals' perceptions of their own ability to carry out necessary actions to deal with potential situations (Bandura, 1982). Based on this perception, a sense of personal agency develops, which is pivotal in motivational and behavioral processes such as making health-related decisions (Glasofer et al., 2013a), as well as the initiation and execution of disease-coping behaviors (Bandura, 1977; Zhou et al., 2021). It has also been reported that self-efficacy is strongly

related to mental health (Abdel-Khalek & Lester, 2017; DaLomba et al., 2021) and can serve as a link between daily stress and psychological wellbeing (Schönfeld et al., 2019).

A study conducted by Dehghan et al. (2022) with the aim of investigating the predictors of sleep quality among female university students has shown that general self-efficacy has a significant direct effect on healthy and unhealthy eating behaviors. Another study has indicated that higher general self-efficacy among college students is associated with a greater intention to achieve or maintain a healthy weight (Helme-Guizon et al., 2021), which is helpful in preventing anorexia nervosa's restraint symptoms. Furthermore, it has been confirmed that greater general self-efficacy is associated with lower episodes of loss of control in eating (Glasofer et al., 2013b) and the number of weeks of binge eating (Bardone-Cone et al., 2006).

1.3 Eating Disorders in Undergraduate Students

A nine-year national investigation of college students' mental health in the United States has shown that across all races and ethnicities, the number of students with one or more mental health issues has significantly increased since 2013 (Lipson et al., 2022). It also has been reported that among various mental health problems, eating disorders have the highest prevalence (19 - 48%) in undergraduate students (Kang et al., 2021a).

The average age for eating disorder onset has been reported between 18 and 21 years old, underscoring young adulthood as a high-risk period (Hudson et al., 2007), which typically includes the early years of university. In the initial years of higher education, the question of the transition to the life of a university student is raised, which is viewed as one of the important contributors to a healthy lifestyle. During this transitional period, in addition to their educational obligations, undergraduates encounter the new challenge of monitoring their health as young adults (Aceijas

et al., 2017). That's why university students, particularly those in their early years, have demonstrated a high risk for developing eating disorders (Pengpid & Peltzer, 2018; Torres et al., 2017a). A qualitative study has indicated that students' existing symptoms of eating disorders are exacerbated due to the transition to university by: underestimating the severity of EDs; assuming the new environment of university as a healing factor; losing the external monitoring previously applied to their eating and exercise routine; relying on disordered eating habits as a self-soothing method against stressors of the new life; and finally receiving reinforcement from peers and classmates regarding their wrong patterns of interaction with food (Goldschen et al., 2019). In fact, the transition to the university stage is considered both a facilitator and an obstacle for the prognosis of students with EDs; it functions as a motivator for recovery but may also lead to frustration, as those with severe eating disorder symptoms may be forced to stop or postpone their education (Webb & Schmidt, 2021). Hence, disordered eating in undergraduate students is negatively associated with their academic performance (Serra et al., 2020; Yanover & Thompson, 2008), which can jeopardize their future accomplishments (Rudakov & Roshchin, 2019). Accordingly, scientific evidence suggests a significant correlation between the cumulative grade point average (CGPA) of university students and their prospective income (Soon et al., 2020).

It has been established that approximately 20% of undergraduate students, in general, have symptoms of an eating disorder. Nevertheless, cultural differences have also been observed in the prevalence of eating disorders among undergraduates (Alhaj et al., 2022a).

1.4 Cultural Differences in Eating Disorders

There is evidence that the influence of certain risk factors on eating disorder symptoms may be stronger in some cultures than others. For instance, it has been reported that an extreme form of closeness in family interactions may be a risk factor for disordered eating, depending on cultural values (Tomiyama & Mann, 2008). The degree of body dissatisfaction has also been recognized as being different across cultures (Jaeger et al., 2002). Furthermore, findings have shown that culture can influence the relationship between parenting styles and academic achievement (Pinquart & Kauser, 2018b). Thus, when it comes to the factors affecting eating disorders and academic achievement, the contribution of cultural context cannot be overlooked.

Culture refers to what has previously worked in a society and is thus valuable enough to be passed down to future generations. Cultural elements include social norms, values, and established behavioral criteria (Triandis, 2001). There are two predominant perspectives on culture: individualism and collectivism, referring to culturally distinctive characteristics (Singelis et al., 1995). Individualism is defined by prioritizing the goals of individuals, whereas collectivism prioritizes the goals of the collective (Triandis et al., 1993). In other words, Individualist culture is distinguished by people's autonomy and independence; their actions are driven primarily by their preferences rather than societal norms and are focused on justice. Notably, strategies by which parents rear their children are particularly shaped by culture (Haslam et al., 2020a; Triandis et al., 1993).

In individualist societies, parents tend to foster in their kids a sense of autonomy, self-reliance, and independence, as well as creativity and exploration. On the other hand, in collectivist societies, individuals heavily rely on those within their in-groups such as their family, tribe, etc., and conduct primarily in accordance with in-group standards. Moreover, relationship maintenance is a major

concern for most of them. In collectivist societies, parents expect their children to demonstrate conformity, obedience, security, and reliability.

Surprisingly, individualistic and collectivistic cultures have been identified with two horizontal (emphasizing equality) and vertical (emphasizing hierarchy) dimensions. Therefore, four types of cultures are formed: Horizontal Individualism (HI), Vertical Individualism (VI), Horizontal Collectivism (HC), and Vertical Collectivism (VC). People in a culture where horizontal individualism predominates, value being unique and doing their own thing. Vertical individualism on the other hand, is characterized by a society where people desire both independence and being "the best" (Triandis, 2001). Horizontal collectivism refers to people being merged with others, namely family, coworkers, etc., without feeling subordinated, while vertical collectivism explains a culture in which obeying the authorities and sacrificing for others is desired (Triandis et al., 1998).

According to a recent systematic review and meta-analysis which was conducted to provide an updated assessment of the prevalence of eating disorders, the lifetime prevalence rate of EDs, prior to 2021, in Western countries (including European countries, Australia, and the United States) and general population has been 1.89%, which is eight and a half times higher than the corresponding rate observed in Asian countries (namely China, South Korea, and Saudi Arabia). Moreover, the lifetime prevalence of anorexia nervosa in Western countries was found to be 21 times higher compared to Asian countries. Similarly, the prevalence of bulimia nervosa was 7.3 times higher in Western countries in comparison to Asian countries, while binge eating disorder was shown to be twice as prevalent in Western countries (Qian et al., 2022).

On the other hand, a more recent narrative review examining the global prevalence of DSM-5 eating disorders in individuals up to the age of 30, has revealed high prevalence rates of EDs in

the Western countries as well as Eastern Europe, Asia, and Latin America. To be exact, 5.5% to 17.9% of young women and 0.6% to 2.4% of young men in Western contexts, specifically European nations, the United States, Canada, Australia, and Russia have reported experiencing an eating disorder. Accordingly, the reported lifetime prevalence rates of DSM-5 diagnosed eating disorders are as follows: anorexia nervosa affects approximately 0.8% to 6.3% of women and 0.1% to 0.3% of men; bulimia nervosa impacts around 0.8% to 2.6% of women and 0.1% to 0.2% of men; and binge eating disorder influences almost 0.6% to 6.1% of women and 0.3% to 0.7% of men (Silén & Keski-Rahkonen, 2022).

1.5 Current Research

While certain variables have been identified as the most critical risk factors for the development of eating disorder symptoms, it has been firmly recommended that these variables be collectively incorporated into future models exploring the etiology of eating disorders (Pennesi & Wade, 2016). Nevertheless, no study to date has considered all the previously mentioned risk factors together into a thorough model for the investigation of EDs' antecedents, among undergraduate university students. Thus, given all aforementioned and in light of the fact that there is a dearth of awareness and resources regarding eating disorders among non-specialized university employees (Webb & Schmidt, 2021), conducting a comprehensive study about the etiology of eating disorders and subsequent poor academic achievement among this at-risk population seemed essential.

In order to expand clinical knowledge, explore new aspects of the literature on disordered eating and poor academic achievement, and plan for the prevention, early detection, and treatment of eating disorders in the susceptible group of undergraduate university students, a novel and comprehensive model was proposed in which early maladaptive schemas, body dissatisfaction,

and self-efficacy act as mediators in the effects of parenting styles, childhood abuses, weight-related teasing, and sociocultural attitudes towards appearance on eating disorder symptoms and academic achievement (see Figure 1.2). Moreover, to examine the cultural generalizability and validity of the hypothesized relationships, a single path model was evaluated amongst two cultural groups: a European nation (Spain) and an Asian country (Iran) characterized by distinct collectivist cultural orientations (García & Gracia, 2014). Following an examination of hypothesized mediations and the identification of dominant cultural values in each country, the influence of these cultural values on mutual relationships was investigated by considering culture as a moderator for shared mediations between the Spanish and Iranian models.

However, due to the large number of risk factors and the intricate nature of the relationships, it was crucial to first review the literature on the interactions between all the variables before proposing the definitive research model. As a result, a narrative literature review was carried out to provide evidence for each relationship in the complicated hypothesized model.

Furthermore, to assess parenting styles in the hypothesized model, the Parental Bonding Instrument (PBI) was employed, which had been translated and validated in Spain three decades ago using a sample of women who had recently given birth (Gómez-Beneyto et al., 1993). Indeed, the sample employed in this old validation was not representative of the 18-25-year-old Spanish youth that was the target population of the present research. Therefore, conducting a new PBI validation study using a sample of Spanish male and female university students also seemed necessary.

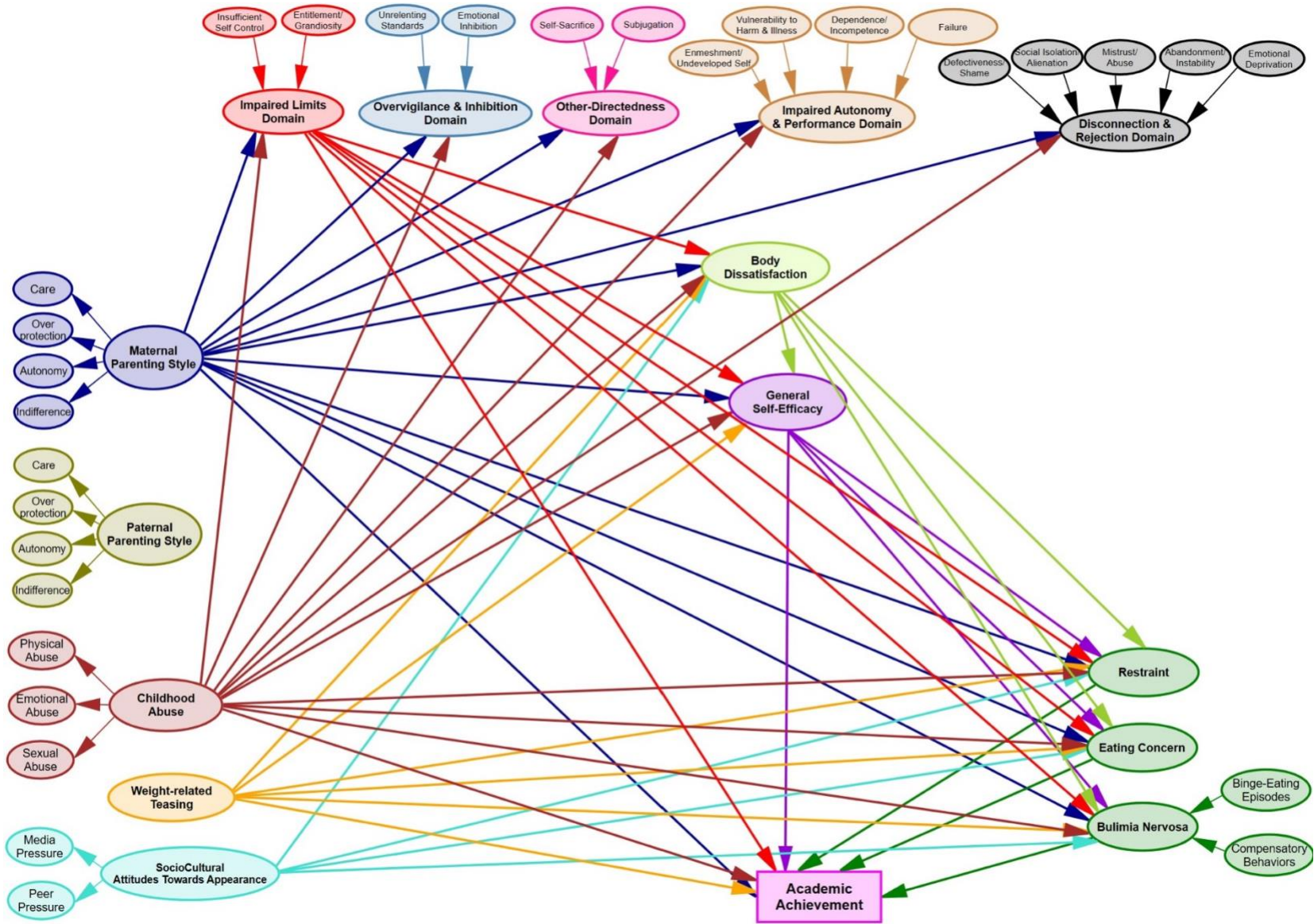
In light of what was argued, by this dissertation we aimed to: 1) set the groundwork for the development of the research model, 2) revise the Spanish version of the Parental Bonding Instrument and test a new factorial structure, and 3) evaluate the hypothesized model for EDs’

Chapter 1

etiology within two culturally different samples. Accordingly, this dissertation presents three distinct studies: the first study is a narrative literature review of the relationships between the independent, mediating, and dependent variables of the proposed model, in the second study the Parental Bonding Instrument was translated and validated for the second time in Spain, and by the third and final study, which served as the major investigation of this dissertation, the hypothesized model for EDs' etiology was evaluated, and the presence of any moderated mediation was assessed.

Figure 1.2

Proposed Model for Eating Disorder Symptoms and Academic Achievement



Note. The arrows connecting paternal parenting style to five schema domains, body dissatisfaction, general self-efficacy, eating disorder symptoms (restraint, eating concern, and bulimia), and academic achievement are similar to the maternal parenting style variable. Likewise, the arrows drawn from the impaired limits schema domain to body dissatisfaction, general self-efficacy, eating disorder symptoms (restraint, eating concern, and bulimia), and academic achievement are repeated for the other four schema domains. The rationale behind the omission of these relationships in this figure was to avoid extra confusion. Moreover, in schema domains and bulimia nervosa, the direction of arrows is from the lower-order component to the higher-order component (e.g., from binge-eating episodes and compensatory behaviors to bulimia nervosa). The reason is that these variables are formative, as explained in Chapter 5.

Chapter 2: Research Objectives and Hypotheses

Based on what was argued in the previous chapter, the main objectives of this dissertation were to: firstly, provide a solid literature foundation for the formulation of a comprehensive etiological model for eating disorders and their relationship with poor academic achievement; secondly, evaluate the psychometric properties of the Parental Bonding Instrument (PBI) within a novel Spanish sample of young men and women; and thirdly, test the proposed research model (in the first study), examine the interrelationships within the model, and explore the differences in these interrelationships between two culturally different samples of undergraduate university students. Accordingly, the current dissertation includes three different studies:

- **First study:** Relationships and Interrelationships Between Eating Disorder Symptoms, Academic Achievement, and Their Common Risk Factors: A Narrative Review
- **Second study:** Parental Bonding Instrument: A New Spanish Validation in a Sample of University Students
- **Third study:** Testing a New Comprehensive Model for Eating Disorder Symptoms and Academic Achievement Among Spanish and Iranian Undergraduates: The Relationships Between Parenting Style, Childhood Abuse, Weight-Related Teasing, Sociocultural Attitudes Towards Appearance, Early Maladaptive Schemas, Body Image, and Self-Efficacy

Subsequent sections outline the general and specific objectives, questions, and hypotheses of each individual study.

2.1 First Study

Relationships and Interrelationships Between Eating Disorder Symptoms, Academic Achievement, and Their Common Risk Factors: A Narrative Review

2.1.1 General Objectives

- To provide a solid literature foundation for the formulation of a comprehensive etiological model for eating disorders and their relationship with academic achievement.

2.1.2 Particular Objectives

Particular objectives of this study were to synthesize the literature on:

- 1) The relationship between eating disorders and academic achievement,
- 2) Eating disorders' risk factors that also serve as risk factors for poor academic achievement,
- 3) The interrelationships between risk factors that are common between disordered eating and poor academic achievement.

2.1.3 Research Questions

In this study we sought to answer the following questions. According to the academic literature:

- 1) Do eating disorder symptoms predict poor academic achievement?
- 2) Do eating disorder risk factors also act as contributors to poor academic achievement?
- 3) Is there a correlation between shared risk factors for eating disorders and low academic performance (are they interrelated)?

2.2 Second Study

Parental Bonding Instrument: A New Spanish Validation in a Sample of University Students

2.2.1 General Objectives

- To evaluate the psychometric properties of the Parental Bonding Instrument (PBI) within a novel Spanish sample of young men and women

2.2.2 Particular Objectives

- 1) To identify the underlying factorial structure of the Spanish PBI using a new sample of university students,
- 2) To conduct confirmatory factor analysis (CFA) for all previously reported models of the PBI employing a new dataset and compare the yielded results,
- 3) To determine an updated model (factorial structure) for the Spanish PBI that best fits the Spanish culture.

2.2.3 Research Questions

- Using a new Spanish sample, can a four-factor structure be adopted for the Parental Bonding Instrument after three decades?

2.3 Third Study

Testing a New Comprehensive Model for Eating Disorder Symptoms and Academic Achievement Among Spanish and Iranian Undergraduates: The Relationships Between Parenting Style, Childhood Abuse, Weight-Related Teasing, Sociocultural Attitudes Towards Appearance, Early Maladaptive Schemas, Body Image, and Self-Efficacy

In this study, the proposed model (Figure 1.1) was validated, the interrelationships within the model were examined, and the differences in these interrelationships were explored between two culturally different samples. To this end, the general and particular objectives of this research were as presented below:

2.3.1 General Objectives

- 1) To examine the mediating roles of early maladaptive schema domains and body dissatisfaction in the effects of parenting style, childhood abuse, weight-related teasing, and sociocultural attitudes towards appearance on eating disorder symptoms,
- 2) To examine the mediating roles of early maladaptive schema domains, body dissatisfaction, general self-efficacy, and eating disorder symptoms in the effects of parenting style, childhood abuse, and weight-related teasing on academic achievement,
- 3) To examine the difference in the hypothesized relationships across two diverse cultural groups of Spanish and Iranian undergraduate students.

2.3.2 Particular Objectives

- 1) To examine the mediating roles of early maladaptive schema domains and body dissatisfaction in the relationship between parenting style and eating disorder symptoms,
- 2) To examine the mediating roles of early maladaptive schema domains and body dissatisfaction in the relationship between childhood abuse and eating disorder symptoms,
- 3) To examine the mediating role of body dissatisfaction in the relationships that weight-related teasing and sociocultural attitudes towards appearance have with eating disorder symptoms,
- 4) To examine the mediating roles of early maladaptive schema domains, body dissatisfaction, and eating disorder symptoms in the relationship between parenting style and academic achievement,
- 5) To examine the mediating roles of early maladaptive schema domains, body dissatisfaction, and eating disorder symptoms in the relationship between childhood abuse and academic achievement,
- 6) To examine the mediating roles of body dissatisfaction and eating disorder symptoms in the relationship between weight-related teasing and academic achievement,
- 7) To examine the mediating roles of early maladaptive schema domains and general self-efficacy in the relationship between parenting styles, childhood abuse, and academic achievement,
- 8) To examine the mediating roles of body dissatisfaction and general self-efficacy in the relationships that childhood abuse and weight-related teasing have with academic achievement,
- 9) To examine the moderating role of culture in common mediations between the Spanish and Iranian models.

2.3.3 Research Hypotheses

Hypothesis 1a-d: Early Maladaptive Schema Domains (EMSD) and Body Dissatisfaction (BD) Mediate the Effect of Parenting Style (PS) on Eating Disorder Symptoms (EDS).

H1a: EMSD mediate the effect of PS on EDS.

H1b: BD mediates the effect of PS on EDS.

H1c: EMSD and BD sequentially mediate the effect of PS on EDS.

H1d: EMSD mediate the effect of PS on BD.

Hypothesis 2a-e: Early Maladaptive Schema Domains (EMSD) and Body Dissatisfaction (BD) Mediate the Effect of Childhood Abuse (CA) on Eating Disorder Symptoms (EDS).

H2a: EMSD mediate the effect of CA on EDS.

H2b: BD mediates the effect of CA on EDS.

H2c: EMSD and BD sequentially mediate the effect of CA on EDS.

H2d: BD mediates the Effect of EMSD on EDS.

H2e: EMSD mediate the effect of CA on BD.

Hypothesis 3a-b: Body Dissatisfaction (BD) Mediates the Effects of Weight-Related Teasing (WT) and Sociocultural Attitudes Towards Appearance (SCATA) on Eating Disorder Symptoms (EDS).

H3a: BD mediates the effect of WT on EDS.

H3b: BD mediates the effect of SCATA on EDS.

Hypothesis 4a-d: Early Maladaptive Schema Domains (EMSD), Body Dissatisfaction (BD), and Eating Disorder Symptoms (EDS) Mediate the Effect of Parenting Style (PS) on Academic Achievement (AA).

H4a: EMSD, BD, and EDS sequentially mediate the effect of PS on AA.

H4b: EMSD mediate the effect of PS on AA.

H4c: EDS mediate the effect of PS on AA.

H4d: BD and ED sequentially mediate the effect of PS on AA.

Hypothesis 5a-d: Early Maladaptive Schema Domains (EMSD), Body Dissatisfaction (BD), and Eating Disorder Symptoms (EDS) Mediate the Effect of Childhood Abuse (CA) on Academic Achievement (AA).

H5a: EMSD, BD, and EDS sequentially mediate the effect of CA on AA.

H5b: EMSD mediate the effect of CA on AA.

H5c: EDS mediate the effect of CA on AA.

H5d: BD and ED sequentially mediate the effect of CA on AA.

Hypothesis 6a-b: Body Dissatisfaction (BD) and Eating Disorder Symptoms (EDS) Mediate the Effect of Weight-Related Teasing (WT) on Academic Achievement (AA).

H6a: BD and EDS sequentially mediate the effect of WT on AA.

H6b: EDS mediate the effect of WT on AA.

Hypothesis 7a-f: Early Maladaptive Schema Domains (EMSD) and General Self-Efficacy (GSE) Mediate the Effects of Parenting Style (PS) and Childhood Abuse (CA) on Academic Achievement (AA).

H7a: EMSD and GSE sequentially mediate the effect of PS on AA.

H7b: GSE mediates the effect of PS on AA.

H7c: EMSD mediate the effect of PS on GSE.

H7d: EMSD and GSE sequentially mediate the effect of CA on AA.

H7e: GSE mediates the effect of CA on AA.

H7f: EMSD mediate the effect of CA on GSE.

Hypothesis 8a-e: Body Dissatisfaction (BD) and General Self-Efficacy (GSE) Mediate the Effects of Childhood Abuse (CA) and Weight-Related Teasing (WT) on Academic Achievement (AA).

H8a: BD and GSE sequentially mediate the effect of CA on AA.

H8b: BD mediates the effect of CA on GSE.

H8c: BD and GSE sequentially mediate the effect of WT on AA.

H8d: GSE mediates the effect of WT on AA.

H8e: BD mediates the effect of WT on GSE.

2.3.4 Research Questions

Since no previous study has examined the moderating role of culture on the hypothesized mediations in this study, no hypothesis could be proposed in this regard. Hence, in addition to the mentioned hypotheses, by this study we also seek to answer the following question:

- Does culture moderate common mediations between the Spanish and Iranian models?

Chapter 3: First Study

Relationships and Interrelationships Between Eating Disorder Symptoms, Academic Achievement, and Their Common Risk Factors: A Narrative Review

3.1 Introduction

More than doubling in prevalence in just the past few years, new evidence indicates that eating disorders are on the rise (Galmiche et al., 2019). A precise comparison has indicated that the lifetime prevalence of binge eating disorder and bulimia nervosa are almost ten and four times higher than that of anorexia nervosa, respectively (Qian et al., 2022). Based on the extant literature on the etiology of eating disorders (EDs), multiple key variables have been recognized as established risk factors for the onset of EDs. These risk factors are a) childhood experiences including quality of parenting and early abuses; b) external influences such as peers and media pressures to be thin and being teased; c) cognitive factors such as the presence of early maladaptive schemas; d) body dissatisfaction; and e) deficits in self-efficacy (Barakat et al., 2023; Pennesi & Wade, 2016).

One of the high-risk groups for the development of clinical eating disorders are undergraduate university students (Harris et al., 2023). It has been reported that during the past decade, primary symptoms of eating disorders such as concerns about losing control over eating, the persistent conviction of being overweight despite contrary opinions from others, the practice of self-induced vomiting, and the prevalence of severe weight loss, have significantly increased among undergraduate students (Romano et al., 2022). Accordingly, a recent meta-analysis has shown that around twenty percent of undergraduate university students exhibit screen-based disordered eating. This prevalence has experienced a global increase, especially over the past decade, without

any statistically significant difference observed between Western and non-Western nations (Alhaj et al., 2022a).

When considering university students, their academic achievement is the foremost aspect that often receives remarkable attention. Previous research has indicated that there is a significant and negative relationship between the risk of disordered eating and academic grades (Adelantado-Renau et al., 2018). However, a more in-depth investigation into the academic literature regarding the contributors to the academic accomplishment reveals that it is predicted not only by the symptoms of eating disorders (Serra et al., 2020a), but also by a number of EDs' risk factors. For instance, parenting style (Stavrulaki et al., 2021), childhood abuse (Slade & Wissow, 2007), weight-related teasing (Lessard et al., 2021), early maladaptive schemas (Azhari, 2017; Chen et al., 2023), and general self-efficacy (Li et al., 2022) have all been shown to be predictors of academic performance. Hence, there appear to be risk factors in common between disordered eating and academic achievement. Notably, no study to date has considered peers and media pressure as risk factors for academic achievement.

Furthermore, an investigation of published studies reveals a substantial body of research indicating the interconnectedness of these common risk factors. To begin, it is worth noting that although research has not established body dissatisfaction as a risk factor for academic performance so far, as one of the most prominent risk factors for disordered eating (Pennesi & Wade, 2016), its mediating role has repeatedly been examined in the influence of parenting style (Cella et al., 2020), childhood abuse (Williams & Gleaves, 2003), and weight-related teasing (Benas & Gibb, 2008; Blodgett Salafia & Gondoli, 2011; Zimmer-Gembeck et al., 2021) on eating disorder symptoms, which adds another dimension to the interrelationships between the risk factors for eating disorders and academic achievement.

To be exact, it has been found that parenting style is correlated with early maladaptive schemas (Maçik, 2021; Salari et al., 2022; Saritas-Atalar & Altan-Atalay, 2020), body dissatisfaction (Chen et al., 2020; Grenon et al., 2016; Pellerone et al., 2017), and general self-efficacy (Guo et al., 2023; Huang et al., 2022); childhood abuse is also related to early maladaptive schemas (Feyzioglu et al., 2022; Mojallal et al., 2021; Shojaati et al., 2021), body dissatisfaction (Kremer et al., 2013; Talmon & Ginzburg, 2018; Treuer et al., 2005), and general self-efficacy (Cohrdes & Mauz, 2020; Haj-Yahia et al., 2021; See Mey et al., 2022); and weight-related teasing is associated with body dissatisfaction (Chen et al., 2022; Gonzaga et al., 2021; Rodgers et al., 2021) and general self-efficacy (Greenleaf et al., 2014; Ievers-Landis et al., 2019).

On the other hand, it has been reported that early maladaptive schemas are related to body dissatisfaction (Kimball et al., 2019; Krug et al., 2021; Moghadam et al., 2021) and general self-efficacy (Hosseinzadeh et al., 2021; Miklósi et al., 2017), and body dissatisfaction, in turn, is related to general self-efficacy (Ouyang et al., 2020; Wang et al., 2023). Nevertheless, no study to date has reviewed published articles on the relationships and interrelationships between eating disorders, academic achievement, and their common risk factors. Therefore, as the literature review of a broader research project for developing and evaluating a comprehensive statistical model for the etiology of eating disorders and academic achievement among undergraduate university students, a narrative literature review was conducted to address the mentioned gap.

By this study, our primary goal was to provide a solid literature foundation for developing an exploratory model that outlines relationships among risk factors for eating disorders, symptoms of eating disorders, and academic performance. To this end, this review specifically aimed to:

1. Synthesize the literature on the relationship between eating disorder symptoms and poor academic achievement,

2. Synthesize the literature on eating disorder risk factors that also can increase the risk of poor academic achievement (namely parenting style, childhood abuse, weight-related teasing, early maladaptive schemas, and general self-efficacy),
3. Identify the available scientific support for the interrelationships between common risk factors for eating disorders and poor academic achievement in three distinct sections:
 - Variables related to early maladaptive schemas (parenting style and childhood abuse).
 - Variables related to body dissatisfaction (parenting style, childhood abuse, weight-related teasing, and early maladaptive schemas),
 - Variables related to self-efficacy (parenting style, childhood abuse, weight-related teasing, early maladaptive schemas, and body dissatisfaction),

Moreover, our study intended to answer the following questions: based on the identified academic literature: 1) Are eating disorder symptoms predictors of poor academic achievement? 2) Do eating disorder risk factors also serve as contributors to poor academic achievement? and 3) Are common risk factors between eating disorders and low academic performance interrelated?

3.2 Methods

Searching for academic literature was carried out in November 2022, with a second update performed in October 2023. Articles were identified based on their titles as well as topics (title, abstract, and keywords) in the Scopus, Web of Science (core collection), ScienceDirect, and PsycINFO databases. The employed search terms for each keyword have been demonstrated in Table 3.1. The selection of papers was according to the following criteria: being written in English or Spanish and published in peer-reviewed journals; dissertations and conference papers were

excluded. All identified articles were thoroughly examined to ascertain whether they addressed the intended relationship.

Table 3.1

Search Strategies in Databases

Keywords	Search Terms
Eating Disorder	("eating disorder" OR "disordered eating" OR anorexia OR bulimia)
Academic Achievement	("academic performance" OR "academic achievement" OR "academic problem" OR "educational achievement")
Parenting Style	("parenting style" OR "parental bond" OR "parenting behavior" OR "parental strategy")
Childhood Abuse	("childhood abuse" OR "childhood maltreatment" OR "childhood trauma" OR "adverse childhood experience" OR "physical abuse" OR "emotional abuse" OR "sexual abuse")
Weight-Related Teasing	("weight related teasing" OR "weight based teasing" OR "weight stigma")
Early Maladaptive Schema	("early maladaptive schema" OR "schema domain" OR "core belief" OR "dysfunctional cognition")
Body Dissatisfaction	("body image" OR "body satisfaction" OR "body dissatisfaction" OR "body shame")
General Self-Efficacy	("self efficacy")

3.3 Results

3.3.1 Eating Disorder Symptoms and Academic Achievement

In a recent study, Serra et al. (2020b), investigated the prevalence and comorbidity patterns of binge-eating and purging behaviors as well as their relationships with academic performance among first-year college students ($M_{age} = 18.4$, $SD = 1.1$). Their findings indicated that binge-eating and purging behaviors significantly and negatively predict academic achievement. Moreover, Adelantado-Renau et al. (2018) examined the relationship between risk of eating disorder and academic performance among adolescents ($M_{age} = 13.9$, $SD = .3$), and found that the risk of disordered eating is significantly and negatively associated with students' academic grades.

Another research conducted by Filipova and Stoffel (2016) examined the prevalence of binge eating disorder and its relationship with health risk factors as well as work and classroom productivity among university students (age range: 18-24), and their findings showed that experiencing 4 to 7 episodes of binge eating per week can significantly and negatively predict university students' overall classroom productivity. In addition, Yanover and Thompson (2008b) studied the relationship between the score of Eating and Body Image Disturbances Academic Interference Scale and measures of eating disturbance, body image, and academic achievement among undergraduate students ($M_{age} = 20.43$, $SD = 3.71$). Their results indicated that undergraduate students' symptoms of anorexia and bulimia nervosa are significantly and negatively correlated with their academic performance. Overall, existing academic literature suggests that academic achievement (including academic grades, Grade Point Average (GPA), or productivity) is significantly and negatively associated with symptoms of eating disorders such as binge-eating, purging, and also symptoms of anorexia and bulimia nervosa.

In the sections that follow, we will address eating disorder risk factors that also serve as risk factors for poor academic achievement.

3.3.2 Risk Factors for Poor Academic Achievement

3.3.2.1 Parenting Style and Academic Achievement

In 2021, Stavroulaki et al. investigated the relationship between parenting styles, life satisfaction, motivation orientation, and academic achievement among undergraduate university students (age range: 18-23) and reported that academic achievement (GPA) of undergraduates is significantly and negatively influenced by perceived authoritarian parenting style. According to their findings, university students' GPA is also significantly and positively correlated with authoritative

parenting. However, Masud et al. (2016a) examined the mediating role of academic self-efficacy in the relationship between parenting style and academic performance in first-year university students and found that none of the authoritarian, authoritative, and permissive parenting styles have significant influence on GPA. In contrast, Kenney et al. (2015) studied the mediating roles of college adjustment and academic achievement (GPA) in the relationship between parenting style and alcohol consumption and its consequences among college students ($M_{age} = 19.01$, $SD = 1.65$), and reported that the authoritarian and authoritative parenting significantly influence the GPA of college students (negatively and positively, respectively). In other words, authoritarian parenting caused lower GPA, but authoritative parenting led to higher GPA. However, no significant effect was observed from the permissive parenting style on the academic achievement. Results of another study by Abar et al. (2009), which explored the effects of maternal parenting style and religious commitment on self-regulation, academic achievement, and risk behavior, showed that none of the authoritative, authoritarian, and permissive parenting styles were significantly correlated with academic achievement (GPA) of college students. Furthermore, Turner et al. (2009) investigated the influence of parenting style, self-efficacy, and achievement motivation on college students' academic performance ($M_{age} = 19.27$, $SD = 1.51$), and found that authoritative parenting style significantly and positively predicts college students' academic performance (GPA), while authoritarian and permissive do not. On the other hand, Joshi et al. (2003) studied the relationship between parenting style and academic achievement (GPA) in college students (age range: 21-30) and found no significant correlation between maternal and paternal involvement and strictness, and students' GPA.

It worth noting that most of the reviewed studies have investigated the authoritarian, authoritative, and permissive styles as dimensions of parenting. Among existing evidence, in terms

of authoritarian parenting style, two studies show significant relationship, and three studies show nonsignificant association between this parenting style and GPA. Regarding the authoritative parenting style, three studies have reported significant, and two studies have indicated nonsignificant correlation between this style of parenting and academic achievement. Therefore, as a conclusion, it appears that regarding the relationship between parenting style and academic achievement, academic literature presents inconsistent findings; in other words, the correlation between different styles of parenting and academic achievement in general population cannot be confirmed or rejected and, depending on the researchers' priorities, certain studies may be considered as supporting evidence. However, permissive parenting style, which is characterized by parents' high responsiveness and low demand (Čablová et al., 2014), has constantly been found not significantly related to the academic achievement.

3.3.2.2 Childhood Abuse and Academic Achievement

In terms of the relationship between childhood abuses and academic achievement, Tognin et al. (2023) have recently investigated the correlation between adverse childhood experiences and academic achievement among young people in a clinical sample with high risk of psychosis and healthy counterparts (age range: 15-35). They have found that in both clinical and healthy groups, there was a significant negative correlation between the total score of the childhood trauma questionnaire and the number of days in education. On the other hand, Qu et al. (2023) examined the effect of adverse childhood experiences on the sleep quality, emotional and behavioral problems, and academic achievement among middle school students ($M_{\text{age}} = 12.31$, $SD = 1.83$) and reported that none of the emotional, physical, or sexual abuses can significantly predict low academic achievement. Moreover, Muwanguzi et al. (2023) studied the impact of adverse

childhood experiences on academic performance, depression, and suicidal ideations in university students ($M_{\text{age}} = 22.8$, $SD = 3.16$), and found no significant association between emotional, physical, or sexual abuse and academic performance. However, Moore et al. (2020), investigated the association between childhood maltreatment and college outcome ($M_{\text{age}} = 19.02$, $SD = 2.31$) and found that experiencing physical and emotional abuse during childhood is significantly and negatively related to college academic performance (GPA), while sexual abuse is not. Welsh et al. (2017) also studied the history of childhood maltreatment and college academic outcomes and no significant direct effect of childhood emotional, physical, and sexual abuse on the GPA of college students ($M_{\text{age}} = 19.33$, $SD = 2.21$) was observed. Another study conducted by Pelcovitz et al. (2017), with the aim of assessing academic achievement in young adults (age range: 12-18) with a history of physical abuse during adolescence, indicated that physically abused adolescents report significantly lower school grades compared to the unabused group. Furthermore, these abused individuals had completed significantly fewer years of school during their young adulthood in comparison to the unabused group. Moreover, Porche et al. (2011) examined the role of childhood physical and sexual abuse and psychiatric disorders as correlates of school dropout in young adults (age range: 21-29) and found that individuals who had experienced physical and sexual abuse during childhood, had significantly higher dropout rates in comparison to unabused participants. Their findings also showed that being abused during childhood significantly and positively predicts being dropped out of school. In addition, Slade and Wissow (2007), explored the relationship between childhood maltreatment and adolescents' academic performance ($M_{\text{age}} = 15.47$, $SD = .06$), and found that being exposed to childhood physical and sexual maltreatment can significantly predict lower GPA in adolescence.

To sum up, it can be noted that among eight reviewed articles, two studies have reported no significant relationship between none of the physical, emotional, and sexual abuse and the academic achievement and one study has indicated that there is not a direct but an indirect relationship between mentioned variables. However, five studies have shown that experiencing physical, emotional, or sexual abuse during childhood is significantly correlated with later academic performance. Hence, it appears that a big proportion of the existing findings confirms the significant link between different kinds of early abuse and academic performance in later stages of life.

3.3.2.3 Weight-Related Teasing and Academic Achievement

Lydecker et al. (2023) examined the relationship between different types of weight-based bullying (namely verbal, social, physical, and cyber) and children's ($M_{\text{age}} = 11.70$, $SD = 2.90$) impaired function in school, social, and family life. They found that participants who had been verbally and physically teased were respectively more than 2.5 and 5 times as likely to be absent from school compared to those who had not experienced verbal and physical weight-based bullying. Moreover, Lessard et al. (2021) studied the relationship between weight-related teasing and academic grades in adolescents ($M_{\text{age}} = 15.97$, $SD = 1.25$), and reported that weight-based teasing (on behalf of peers) significantly and negatively predicts students' academic achievement. Lessard et al. (2020) also studied the associations between being teased (based on body weight, gender, religion, disability, sexuality, and gender typicality) and various school outcomes (such as school safety, school grades, and school suspension) among adolescents with sexual and gender minority ($M_{\text{age}} = 15.57$, $SD = 1.27$). Their results revealed significant negative correlation between weight-based bullying victimization and academic grades. In addition, Guardabassi et al. (2018)

investigated the mediating role of weight-related teasing in the relationship between BMI and health-related quality of life (including academic performance domain) among primary school students ($M_{\text{age}} = 115.72$ months, $SD = 10.52$), and found that weight-related teasing significantly and negatively influences the academic function of students. Another study conducted by Gunnarsdottir et al. (2012) examined the link between teasing/social rejection, psychological adjustment, and academic competencies among obese school-age children ($M_{\text{age}} = 11.02$, $SD = 1.42$) and reported that being teased is significantly and negatively associated with general academic ability. Furthermore, Krukowski et al. (2009) conducted research with the aim of exploring whether being overweight is a significant predictor of weak school performance. Their findings showed that weight-related teasing is a significant and negative predictor of school grades among elementary and middle-school students ($M_{\text{age}} = 9.5$, $SD = .01$).

Notably, all the research regarding the relationship between weight-related teasing and academic achievement has been so far conducted among school-age children or adolescents. Collectively, results of the reviewed studies regarding the relationship between weight-based teasing victimization and academic performance strongly suggest that experiencing weight-based teasing is significantly related to poor academic performance.

3.3.2.4 Early Maladaptive Schemas and Academic Achievement

Searching for the academic literature on the relationship between early maladaptive schemas and academic achievement revealed that only few studies have addressed this link. Namely, a recent study by Chen et al. (2023) have investigated the mediating role of gender traits in the relationship between early maladaptive schemas and social adaptation among middle school students ($M_{\text{age}} = 13.94$, $SD = 1.50$). According to the results of this study, there is a significant

correlation between academic achievement (as a dimension of social adaptation) and ten early maladaptive schemas. Moreover, Ahami et al. (2017) examined the relationship between early maladaptive schemas and academic performance of Moroccan undergraduate students (age range: 17-21) and reported that the dependence/incompetence, emotional deprivation, social isolation/alienation, mistrust/abuse, unrelenting standards, and abandonment/instability schemas are negatively correlated with the number of passed units in undergraduate students. Furthermore, another study conducted by Azhari (2017) have addressed the mediating role of perfectionism in the link between early maladaptive schemas and academic procrastination among high school students ($M_{age} = 16$, $SD = .65$), and findings indicated that failure, dependence/incompetence, and unrelenting standards schemas have a significant direct impact on the academic procrastination. In addition, Cecero et al. (2008) have studied the association between schemas in the disconnection/rejection schema domain and college adjustment in undergraduate students (age range: 18-22). Their results revealed significant negative correlation between the academic adjustment, being a dimension of college adjustment, and all schemas in the disconnection/rejection domain. Taken together, existing research on the link between early maladaptive schemas and academic achievement suggests significant association between these variables.

3.3.2.5 General Self-Efficacy and Academic Achievement

In terms of the relationship between self-efficacy and academic achievement, Li et al. (2022) explored the mediating role of self-efficacy in the relationship between proactive personality and academic performance of college students ($M_{age} = 20.12$, $SD = 1.58$). Their findings showed that general self-efficacy significantly and positively influences college students' academic

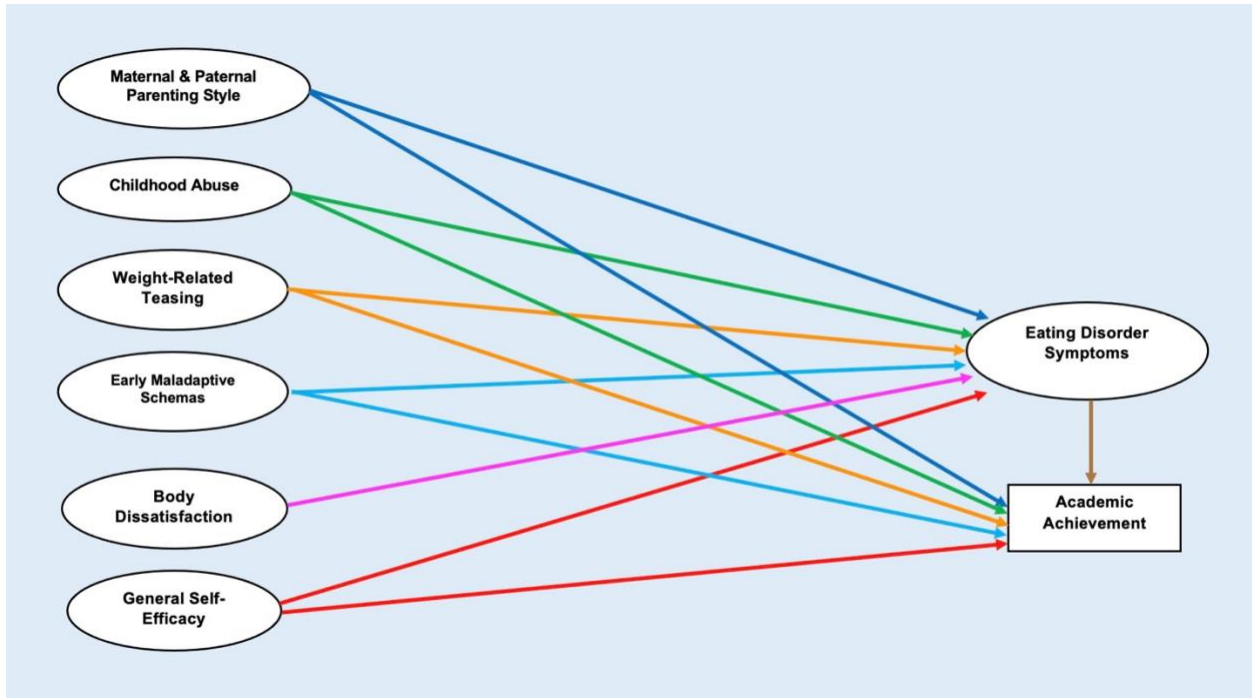
performance. Moreover, Chang and Tsai (2022) have recently conducted research about the effect of university students' general self-efficacy on their academic achievement. Their findings demonstrated that general self-efficacy of university students significantly and positively impacts their academic grades. Furthermore, Sucuoğlu (2018) examined the effect of socio-economic status on undergraduate students' academic achievement and self-efficacy, as well as the relationship between self-efficacy and academic achievement. They found that there is a significant and positive correlation between students' scores on the general self-efficacy scale and their academic performance (GPA). In addition, Yuan et al. (2016) investigated how the quality of parent-child relationship is related to young adults' academic achievement and self-efficacy. Their findings showed that general self-efficacy has a significant and positive effect on the academic achievement of college students ($M_{\text{age}} = 19.5$). On the contrary, Choi (2005) conducted a study to examine whether self-efficacy and self-concept can predict academic performance of college students ($M_{\text{age}} = 20.5$, $SD = 4.1$) and found that general self-efficacy is not a significant predictor for course grades among undergraduate students.

In summary, among five reviewed articles, four studies have confirmed a significant positive relationship between general self-efficacy and academic achievement and only one study reported nonsignificant association between mentioned variables. Therefore, we may conclude that general self-efficacy can significantly be related to academic achievement.

To this point, a synthesis of existing findings indicates that certain well-established eating disorders' risk factors can also be related to the diminished academic achievement (see Figure 3.1).

Figure 3.1

Disordered Eating, Academic Achievement, and their Shared Risk Factors



Now, in the sections that follow, the interconnections between these shared risk factors will be discussed considering three distinct sections of variables related to self-efficacy, variables related to body dissatisfaction, and variables related to early maladaptive schemas.

3.3.3 Interrelationships Between Common Risk Factors for Eating Disorders and Poor Academic Achievement

3.3.3.1 Variables Related to Early Maladaptive Schemas

3.3.3.1.1 Parenting Style and Early Maladaptive Schemas

Salari et al. (2022) investigated the mediating role of maladaptive cognitive schemas in the relationship between parenting style and chronic pain among adolescents ($M_{age} = 16.87$, $SD =$

1.94). Their results indicated that authoritative parenting style has a significant, direct, and negative influence on 4 domains of early maladaptive schemas (disconnection/rejection, impaired autonomy/performance, overvigilance/inhibition, and impaired limits domain). However, no significant effect was observed from authoritative parenting on other-directedness schema domain. Moreover, their findings revealed that authoritarian parenting style significantly, directly, and positively influences all five domains of early maladaptive schemas (disconnection/rejection, impaired autonomy/performance, other-directedness, overvigilance/inhibition, and impaired limits domain), while permissive parenting style had a significant, direct, and positive impact on four schema domains (disconnection/rejection, impaired autonomy/performance, other-directedness, and impaired limits domain).

Another study was conducted by Maęcik (2021) with the aim of investigating the relationship between temperament, parenting style, and early maladaptive schemas among adult subjects ($M_{age} = 33.23$, $SD = 12.96$). Findings of this research showed that positive parenting styles (acceptance and autonomy encouragement) did not have a significant impact on early maladaptive schemas (none of the five domains), while negative parenting styles (rejection, over-demanding, and inconsistency) significantly, directly, and positively influenced early maladaptive schemas.

Moreover, Saritas-Atalar and Altan-Atalay (2020) examined the mediating role of three early maladaptive schema domains (disconnection/rejection, impaired autonomy, and impaired limits) in the relationship between maternal parenting behaviors and depression, anxiety, and anger in undergraduate students ($M_{age} = 21.89$, $SD = .43$). They found that perceived maternal rejection has a significant, positive, and direct effect on disconnection/rejection schema domain and is significantly and positively correlated with impaired autonomy domain. On the other hand, perceived maternal control had a significant, direct, and positive impact on impaired autonomy

and impaired limits schema domains and was significantly and positively related to disconnection schema domain.

In addition, Shute et al. (2019) studied the relationship between parenting styles (rejection and control), early maladaptive schemas (insufficient self-control, mistrust/abuse, abandonment/instability, subjugation, entitlement/grandiosity, enmeshment/undeveloped-self, social isolation/alienation, and vulnerability to harm and illness schema), trait anger, and symptoms of depression and anxiety among adult participants (age range: 18-50). They found that maternal rejection significantly, directly, and positively influences subjugation schema and has a significant and positive indirect effect on the insufficient self-control schema. Moreover, maternal control significantly, directly, and positively influenced subjugation, enmeshment/undeveloped-self, and social isolation/alienation schemas. On the other hand, paternal rejection significantly, directly, and positively influenced mistrust/abuse and abandonment/instability schemas and had a significant and positive indirect effect on the social isolation/alienation as well as the vulnerability to harm and illness schemas. No significant direct or indirect effect was found from paternal control on any of the measured schemas.

Furthermore, Gibson and Francis (2019) investigated the correlation between mothers' parenting style and daughters' early maladaptive schemas (Mothers: $M_{age} = 55.74$, $SD = 8.75$; Daughters: $M_{age} = 26.28$, $SD = 9.33$). Results showed that authoritative parenting style was significantly and negatively correlated with emotional deprivation, defectiveness/shame, social isolation/alienation, dependence/incompetence, and subjugation schemas. Authoritarian parenting style was significantly and positively related to enmeshment/undeveloped-self schema. Permissive parenting style, on the other hand, was significantly and positively associated with entitlement/grandiosity schema.

In another study, Haugh et al. (2017) examined a moderated mediation model in terms of the mediating role of early maladaptive schemas and the moderating role of temperament in the relationship between parenting style and depressive symptoms among undergraduate students ($M_{age} = 19.58$, $SD = 2.24$). Their findings showed that there is a significant and positive correlation between two domains of disconnection/rejection and impaired autonomy/performance and emotionally depriving, belittling, and overprotective parenting behaviors.

A review of existing research on the relationship between parenting styles and early maladaptive schemas reveals that findings are somehow dispersed in this regard. A possible explanation can be the number of individual schemas and schema domains. On the other hand, some studies have considered schemas, while others have investigated schema domains. Overall, existing body of research supports the significant correlation between different schemas and schema domains, and distinct styles of parenting. Notably, what seems to be specifically repeated in multiple previous studies is the significant link between the practice of negative parenting strategies (such as being authoritarian, overprotective, rejecting, and controlling) and most of the individual schemas and schema domains.

3.3.3.1.2 Childhood Abuse and Early Maladaptive Schemas

Feyzioğlu et al. (2022) studied the mediating role of early maladaptive schemas in the relationship between early childhood trauma and alexithymia among adult voluntary participants ($M_{age} = 34.47$, $SD = 12.08$). They found that the childhood trauma questionnaire score significantly and positively predicts all five domains of early maladaptive schemas. Moreover, Mojallal et al (2021) examined the mediating role of early maladaptive schemas (social isolation/alienation, failure, dependence/incompetence, emotional inhibition, and unrelenting standards) in the

relationship between childhood physical and sexual abuse, and adulthood proneness to shame and guilt among undergraduate university students ($M_{age} = 19.31$, $SD = 1.42$). The results of their study indicated that sexual abuse has a significant, direct, and negative effect on emotional inhibition schema. Physical abuse, on the other hand, had a significant, direct, and negative impact on failure and a significant, direct, and positive effect on unrelenting standards schemas.

Furthermore, Shojaati et al. (2021) examined the predictor role of emotional abuse and personality traits on three domains of early maladaptive schemas and social anxiety among first grade school students. They found that emotional abuse during childhood has a significant, direct, and positive effect on early maladaptive schemas (disconnection/rejection, impaired autonomy, and other-directedness domains). In addition, Boyda et al. (2018) studied the relationship between childhood maltreatment and early maladaptive schemas (defectiveness/shame, dependence/incompetence, enmeshment/undeveloped-self, and emotional inhibition schemas) among adult participants ($M_{age} = 36$, $SD = 11.6$), and found that emotional abuse significantly and positively predicts defectiveness/shame and enmeshment/undeveloped-self schemas. Sexual abuse, on the other hand, significantly and positively predicted defectiveness/shame, dependence/incompetence, and enmeshment/undeveloped-self schemas. Notably, none of the four early maladaptive schemas were significantly predicted by physical abuse.

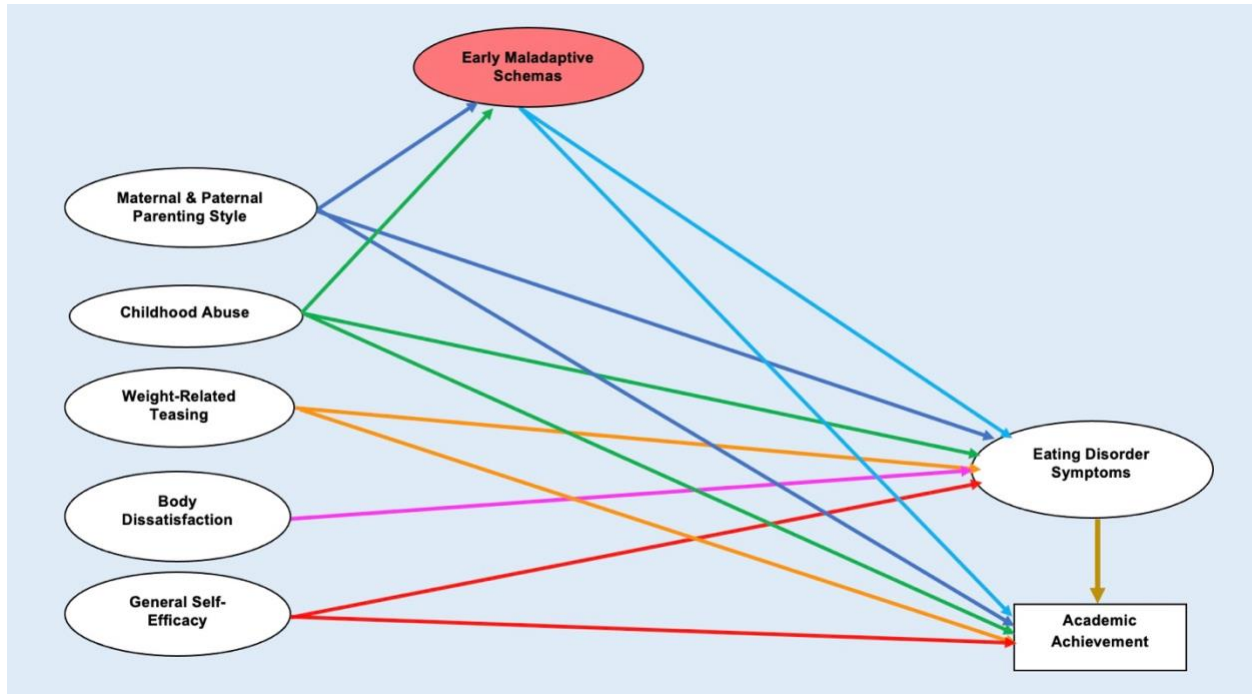
In another study, Estévez et al. (2016) examined the mediating role of five maladaptive schema domains in the relationship between childhood sexual abuse and displaced aggression among adult subjects ($M_{age} = 34.68$, $SD = 8.93$). Their findings showed that sexual abuse during childhood has a significant, direct, and positive effect on disconnection and rejection and impaired autonomy schema domains. However, no significant effect was found from sexual abuse on overvigilance and impaired limits domains. Additionally, Estévez et al. (2019) investigated the mediating role of

early maladaptive schemas in the relationship between childhood sexual abuse and impulsive symptoms among adult female subjects ($M_{\text{age}} = 34.64$, $SD = 9.08$). Their results revealed significant, direct, and positive effect from sexual abuse to disconnection/rejection and impaired autonomy schema domains. Moreover, no significant correlation was observed between sexual abuse and three domains of other-directedness, over vigilance, and impaired limits. On the other hand, Calvete (2014) explored the mediating role of disconnection/rejection, other-directedness, and impaired autonomy schema domains in the relationship between emotional abuse, and depressive and anxiety symptoms among adolescents ($M_{\text{age}} = 13.43$, $SD = 1.29$). Results showed no significant effect from emotional abuse (on behalf of parents) on any of the three schema domains, while all three domains were significantly and positively correlated with parental emotional abuse. Finally, Gay et al. (2013) studied the mediating role of early maladaptive schemas (disconnection/rejection, impaired autonomy, and other-directedness schema domains) in the relationship between childhood emotional abuse and intimate partner violence among female university students ($M_{\text{age}} = 19.14$, $SD = 1.4$). Their findings indicated that emotional abuse during childhood significantly and positively predicts disconnection/rejection and other-directedness schema domains.

In terms of the association between childhood abuse and maladaptive schemas development, it is worth noting that research on the relationship between physical abuse and early maladaptive schemas or schema domains is scarce (only three studies). On the other hand, some studies have addressed the link between abuse and schemas, while others have investigated schema domains. Taken all existing academic findings together, it may be concluded that experiencing different kinds of abuse during childhood can be a significant risk factor for the development of various early maladaptive schemas (see Figure 3.2).

Figure 3.2

Variables Related to Early Maladaptive Schemas



3.3.3.2 Variables Related to Body Dissatisfaction

3.3.3.2.1 Parenting Style and Body Dissatisfaction

In a recent study conducted by Maftai (2023), the mediating role of interpersonal sensitivity was investigated in the relationship between perceived parental controlling behaviors, social network use, and physical appearance anxiety among adolescents ($M_{age} = 13.57$, $SD = .93$), and results revealed nonsignificant correlation between perceived controlling parenting and physical appearance anxiety. On the other hand, Chen et al. (2020) studied the mediating role of dispositional mindfulness and self-compassion in the relationship between perceived parenting style and body appreciation in middle school students (age range: 12-15). Their findings indicated that paternal and maternal rejection and emotional warmth significantly predict body appreciation

(negatively and positively, respectively). However, no significant link was observed between paternal and maternal overprotection and body appreciation. Moreover, Gonçalves et al (2020) studied the association between invalidating parental behaviors, body dissatisfaction, disordered eating, and difficulties in close relationships among college students ($M_{\text{age}} = 20.02$, $SD = 1.51$) and found that both maternal and paternal invalidation are significantly and positively correlated with body dissatisfaction. On the contrary, Cella et al. (2020) examined the mediating role of body shame in the relationship between parental bond, self-esteem, maladaptive perfectionism, body mass index, and eating disorders among high school students ($M_{\text{age}} = 15.61$, $SD = 1.56$) and no significant effect was observed from parental care and overprotection on body shame. Furthermore, Pellerone et al. (2017) investigated the relationship between identity development, parenting styles, body image, and specific foods refusal in young adults ($M_{\text{age}} = 21.56$, $SD = 2.67$) and reported that only maternal control can significantly predict body uneasiness. Another study conducted by Grenon et al. (2016) assessed the mediating role of attachment anxiety and media internalization in the relationship between maternal and paternal care and body dissatisfaction among female patients with eating disorder ($M_{\text{age}} = 28.59$, $SD = 10.39$). Results revealed significant negative correlation between both maternal and paternal care and body dissatisfaction. Nevertheless, only maternal care had a significant and negative impact on body dissatisfaction. In addition, Krug et al. (2016) studied the influence of perceived parental warmth and control, in adolescents aged 13-14, on later eating disorder symptoms at ages 15-16. They found no significant relationship between parenting style and body dissatisfaction among male adolescents. However, in female participants, low parental warmth and also control were significantly and positively correlated with body dissatisfaction. In another study conducted by Slater and Tiggemann (2016), the impact of maternal self-objectification, materialism, and parenting style on

sexualized behaviors and appearance concerns were evaluated in elementary school-age girls (age range: 5-8). Their findings indicated that none of the permissive, authoritarian, or authoritative parenting styles are significantly correlated with girls' appearance concern. Additionally, Patton et al. (2014) explored the relationships between parental care, attachment anxiety, media susceptibility, and body dissatisfaction in female university students ($M_{\text{age}} = 18.72$, $SD = 2.10$) and found that maternal care can significantly, directly, and negatively influence body image dissatisfaction, while paternal care did not have a significant direct effect on body image dissatisfaction. Nevertheless, there was a significant and negative correlation between paternal care and body image dissatisfaction. On the other hand, both maternal and paternal care had a significant indirect effect on body image dissatisfaction. Moreover, Coccia et al. (2012) examined the relationship between perceived indulgent parenting style, weight status, life satisfaction, body image satisfactions, health, and stress in adolescents ($M_{\text{age}} = 15.8$). Their results revealed significant positive associations between two dimensions of indulgent parenting, namely giving too much and soft structure, and body image satisfaction. On the other hand, Taylor et al. (2012) examined the relationship between self-esteem, body dissatisfaction, weight, and perceived parenting style in children ($M_{\text{age}} = 9.28$, $SD = 1.09$) and found no significant correlation between parental responsiveness or demandingness and body dissatisfaction. In contrast, Jáuregui Lobera et al. (2011) evaluated the relationship between parenting styles, self-esteem, coping strategies, anxiety, depression, and eating disorder symptoms among outpatients with eating disorders ($M_{\text{age}} = 21.30$, $SD = 6.62$). Their results showed that maternal and paternal neglectful parenting are significantly and positively correlated with body dissatisfaction. Furthermore, Cheng and Mallinckrodt (2009) studied the mediating role of adult attachment anxiety and media internalization in the relationship between parental care and body image dissatisfaction among

female university students ($M_{\text{age}} = 20.54$, $SD = 3.62$). Their findings indicated that maternal care has a significant, direct, and negative effect on body image dissatisfaction, while no significant direct effect was found from paternal care to body image dissatisfaction. However, a significant and negative correlation between paternal care and body image dissatisfaction was observed. Lastly, Enten and Golan (2009) examined the association between parenting style and eating disorder symptoms among eating disorder patients ($M_{\text{age}} = 18.86$, $SD = 4.7$) and found significant negative correlation between authoritative paternal parenting style and body dissatisfaction. However, no significant association was observed between paternal authoritarian or maternal parenting styles and body dissatisfaction.

In terms of the relationship between parenting style and body dissatisfaction, a comprehensive review of existing literature reveals inconsistent findings. In other words, there are almost equal numbers of studies confirming and rejecting this association. Moreover, some researchers have studied the parental strategies of both parents while others have considered only one parent; some studies have reported their findings based on children's gender, whereas others have reported the results regardless of this matter; and notably, each study has investigated some dimensions or styles of parenting. In summary, it appears that the correlation between perceived parenting style and body dissatisfaction cannot be confirmed or rejected with certainty, and it may merely be noted that previous research supports the significant correlation between parental warmth (care), control, rejection, indifference, and body dissatisfaction.

3.3.3.2.2 Childhood Abuse and Body Dissatisfaction

Bödicker et al. (2022) have recently conducted a meta-analysis regarding the association between childhood maltreatment and abuses, and later body dissatisfaction. Their findings revealed that in non-clinical samples, there is a small association between childhood maltreatment

and body-related attitudes and feelings, concluding that childhood maltreatment should be considered a distal risk factor for body dissatisfaction development. On the other hand, Talmon and Ginzburg (2018) explored the mediating role of disrupted body boundaries and body self-objectification in the relationship between childhood sexual abuse and body shame among university students ($M_{age} = 25.15$, $SD = 4.45$). Their findings indicated that being sexually abused during childhood significantly, directly, and positively predicts body shame among female participants, while this effect is not significant among male subjects. Moreover, Kremer et al. (2013) investigated body image differences between sexual and physical abuse female victims ($M_{age} = 32.68$, $SD = 10.88$), and found that both physical and sexual abuse significantly predict body image. In addition, Dunkley et al. (2010) examined the mediating role of self-criticism in the relationship between childhood maltreatment and body dissatisfaction among patients with binge-eating disorder ($M_{age} = 43.49$, $SD = 8.85$). Their findings showed that childhood emotional and sexual abuse are significantly and positively correlated with body dissatisfaction, while no significant relationship was found between physical abuse and body dissatisfaction. On the other hand, structural equation modeling indicated that childhood emotional abuse has an indirect effect on body dissatisfaction. Another research conducted by Treuer et al. (2005) explored the influence of physical and sexual abuse on the body image of patients with eating disorders ($M_{age} = 24.3$) and found that patients who had been physically abused had significantly more severe body dissatisfaction than patients without the experience of physical abuse. On the other hand, body dissatisfaction of sexually abused patients was not significantly different from unabused ones. Williams and Gleaves (2003a) also investigated the relationships between childhood sexual abuse, body image, and disordered eating among female undergraduate students ($M_{age} = 18.9$). Their results showed that despite a low effect size, there is a significant, direct, and positive effect from

childhood sexual abuse on body image dissatisfaction. Moreover, Harned (2000) studied the relationship between sexual harassment, body image, and eating disturbances among undergraduate students ($M_{\text{age}} = 18.3$, $SD = .83$). They found that physical and sexual abuse significantly and positively predict body image concerns.

In summary, it seems that there are inconsistent findings regarding the relationship between childhood abuse and body dissatisfaction; although six reviewed articles have shown significant correlations between different kinds of early abuse (namely emotional, physical, or sexual) and body dissatisfaction, a recent meta-analysis has reported that this association is trivial and, in fact, childhood abuse should be regarded as a less important risk factor in the development of body dissatisfaction.

3.3.3.2.3 Weight-Related Teasing and Body Dissatisfaction

Chen et al. (2022) examined the mediating and moderating role of weight-related teasing in the relationship between body weight and body dissatisfaction among adolescents ($M_{\text{age}} = 14.20$, $SD = 1.38$), and found that weight related teasing significantly and positively affects body dissatisfaction. Another study conducted by Rodgers et al. (2021), examining the mediating role of body image in the relationship between family and peer teasing in young adulthood and later unhealthy weight control behaviors showed that family teasing significantly and negatively influences women's body satisfaction. However, no significant effect was found from peer teasing on women's body satisfaction. On the other hand, findings of this research indicated no significant effect from peer and family teasing on men's body satisfaction. Moreover, Gonzaga et al. (2021) compared body image dissatisfaction among adolescents who had been teased during the practice of physical activity, and who had not ($M_{\text{age}} = 16.26$, $SD = 1.03$). They found that adolescents who

had been teased during the practice of physical activity had higher body dissatisfaction. In addition, Schaefer and Blodgett Salafia (2014) investigated the mediating role of social comparison in the relation between weight-related teasing by parents, siblings, and peers, and girls' body dissatisfaction ($M_{age} = 13.74$, $SD = .91$). They reported that being teased by parents, siblings, and peers significantly and positively predicts body dissatisfaction among female adolescents. Furthermore, Heijens et al. (2012) studied the influence of weight-related teasing on body dissatisfaction and intention to eat healthy among overweight and obese individuals ($M_{age} = 34.49$, $SD = 10.88$), and found a significant, direct, and positive effect from weight-related teasing to body dissatisfaction. However, in the study conducted by Liang et al. (2011), the impact of being teased during childhood or adolescence on young adults' body image ($M_{age} = 25$, $SD = 2.88$) was investigated. Their results showed that weight-related teasing is not a significant predictor for body areas satisfaction. In contrast, Benas et al. (2010) examined the moderating role of body dissatisfaction in the relationship between weight-related teasing and depressive symptoms among undergraduate female students ($M_{age} = 18.64$, $SD = .97$). Results of their study revealed a significant positive correlation between weight-related teasing and body dissatisfaction. Reddy and Crowther (2007) also investigated the sociocultural correlate of body dissatisfaction and maladaptive eating attitudes among young female participants ($M_{age} = 24$, $SD = 3.95$), and found that weight-related teasing significantly and negatively predicts body satisfaction. Additionally, Kostanski and Gullone (2007) studied the impact of weight-related teasing on body image among primary school children ($M_{age} = 8.8$, $SD = .92$) and found that weight related teasing is a significant and positive predictor for body image dissatisfaction. Moreover, Gleason et al. (2000) examined the relationship between childhood weight-related teasing and later self-esteem and body image among undergraduate students ($M_{age} = 20$, $SD = 2.07$). Their findings indicated that being teased

about weight during childhood can significantly and negatively predict body image, later in life. Lastly, Lunner et al (2000a) explored the relationship between body mass index, weight-related teasing, body image, and eating disturbance in two samples of Swedish and Australian female adolescents ($M_{\text{age}} = 14.3$, $SD = .5$) and observed that weight-related teasing significantly and positively predicts body dissatisfaction in both samples.

What emerges from reviewing the eleven studies here is that, except for one, ten studies have reported a significant relationship between being teased about weight and later body dissatisfaction. Hence, it may be concluded that experiencing weight-related teasing can be associated with being dissatisfied with body image in later stages of life.

3.3.3.2.4 Early Maladaptive Schemas and Body Dissatisfaction

Krug et al. (2021) evaluated the mediating role of dysregulation, impulsivity, self-esteem, and body dissatisfaction in the relationship between insecure attachment, maladaptive schemas, non-suicidal self-injury, and ED symptoms among adult female participants ($M_{\text{age}} = 22.48$, $SD = 8.13$). Their findings indicated that emotional deprivation, mistrust/abuse, failure, social isolation, subjugation, and unrelenting standards schemas were significantly and positively correlated with body dissatisfaction. In another study conducted by Moghadam et al. (2021), the mediating role of self-esteem was examined in the relationship between perfectionism, early maladaptive schemas, attachment styles, and body image concern in female cosmetic surgery applicants ($M_{\text{age}} = 30.72$, $SD = 4.12$). Yielded results indicated that the disconnection/rejection and overvigilance/inhibition schema domains have a significant and positive impact on body image concern. However, no significant influence was observed from other schema domains on body image. Moreover, Kimball et al. (2019) studied the relationship between early maladaptive schemas, theory of mind, body

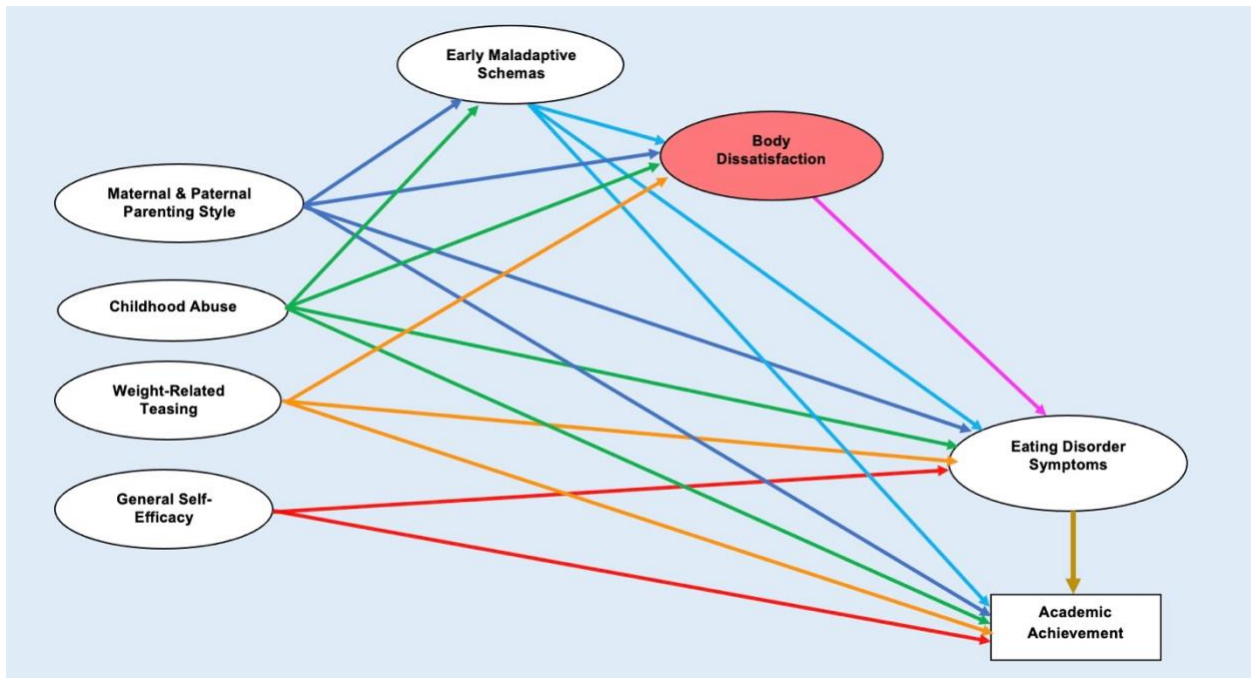
dissatisfaction, and symptoms of disordered eating among female subjects ($M_{\text{age}} = 19.25$, $SD = 3.10$). Their findings revealed that early maladaptive schemas (abandonment, mistrust/abuse, social isolation, defectiveness/shame, and unrelenting standards schemas) have a significant and positive influence on body dissatisfaction. Furthermore, Unoka and Vizin (2017) investigated the association between early maladaptive schemas, self-reported shame (towards character, behavior, and body), and social criticisms and put-downs among three groups of participants: patients with borderline personality disorder ($M_{\text{age}} = 30.32$, $SD = 10.31$), a group of inpatients with affective, anxiety and eating disorder but without any personality disorder ($M_{\text{age}} = 34$, $SD = 11.37$), and a healthy control group ($M_{\text{age}} = 31.56$, $SD = 10.09$). Their findings indicated significant positive correlation between five schema domains and bodily shame in healthy participants, as well as significant positive correlation between disconnection/rejection and other-directedness schema domains and bodily shame among borderline patients. Nevertheless, in the inpatient group, no significant relationship was found between any schema domain and bodily shame. In addition, Boone et al. (2013) examined the relationships between early maladaptive schema domains, perfectionism, and body image concerns among patients with eating disorder who had been treated ($M_{\text{age}} = 21.96$, $SD = 6.11$) and found that disconnection/rejection, impaired autonomy, other-directedness, and over-vigilance schema domains significantly and positively predict body image concerns. Nevertheless, no significant association was observed between impaired limits schema domain and body image concerns. Lastly, Vlierberghe et al. (2009) explored the relationship between early maladaptive schemas, eating disorder symptoms, and depression in overweight adolescents ($M_{\text{age}} = 14.97$, $SD = 1.52$) and reported significant positive correlation between emotional deprivation, abandonment/instability, mistrust/abuse, and failure schemas, and shape concern.

Given the number of individual schemas (18) or schema domains (5), most studies have investigated specific schemas or schema domains. However, taken together, existing academic evidence suggests that there is a significant correlation between all schema domains and body dissatisfaction.

So far, we can conclude that previous research has confirmed the role of parenting style, childhood abuse, weight-related teasing, and early maladaptive schemas as risk factors for body dissatisfaction (see Figure 3.3).

Figure 3.3

Variables Related to Body Dissatisfaction



3.3.3.3 Variables Related to Self-Efficacy

3.3.3.3.1 Parenting Style and Self-Efficacy

Guo et al. (2023) examined the mediating role of general self-efficacy and positive coping style in the effect of parenting style on learning motivation of Chinese undergraduate students (age range: 17-23). They found that parental care, autonomy encouragement, and control significantly influence students' general self-efficacy (positively, positively, and negatively, respectively). Moreover, Huang et al. (2022) studied the influence of parenting style and self-efficacy on subjective well-being and found that positive (care and autonomy encouragement) and negative (controlling) parenting styles significantly predict undergraduate students' ($M_{\text{age}} = 19.86$, $SD = 1.19$) general self-efficacy (positively and negatively, respectively). In another research conducted by Siqueira et al. (2021), the associations between parenting styles, mental disorders, and low self-efficacy were investigated among undergraduate students ($M_{\text{age}} = 23.35$, $SD = 3.78$). Results indicated that maternal affectionless parenting style (low care and high protection) significantly and negatively predicts general self-efficacy, while optimal (high care and low protection), affectionate (high care and high protection), and neglectful (low care and low protection) parenting styles were not significant predictors of general self-efficacy. In addition, Chen et al. (2020) explored the relationship between stressors, mental health, coping styles, social support, parenting styles, and self-efficacy among high school students ($M_{\text{age}} = 14.6$, $SD = 1.82$), and found that fathers' and mothers' positive parenting styles (warmth and understanding) are significantly and positively correlated with teenagers' general self-efficacy. Nevertheless, no significant correlation between negative parenting styles (punishment, overinvolvement, preference, rejection, and overprotection) and general self-efficacy was observed in this study. Furthermore, Keshavarz and Mounts (2017) examined the association between fathers' parenting style and adolescents' self-

efficacy ($M_{age} = 14.39$, $SD = 1.28$). Their findings revealed that both paternal authoritarian and authoritative parenting styles significantly and positively predict adolescents' general self-efficacy. In another study conducted by Lim and Loo (2003), the relationships between parental job security and authoritarian parenting style ($M_{age} = 52$, $SD = 3.8$), and general self-efficacy and work attitudes of undergraduate students ($M_{age} = 21$, $SD = 1.7$) were investigated. Findings showed that maternal authoritarian parenting style significantly and negatively impacts youth's general self-efficacy. However, no significant influence of paternal authoritarian parenting on students' self-efficacy was observed. Additionally, Ingoldsby et al. (2003) studied the association between perceived parenting style, adolescents' achievement orientation, and general self-efficacy ($M_{age} = 15.15$, $SD = 1.08$) within an Ecuadorian and a Chilean statistical model. Their results indicated that, in the Ecuadorian model, paternal and maternal punitiveness and permissiveness significantly and negatively predicted adolescents' general self-efficacy; maternal positive induction significantly and positively predicted adolescents' general self-efficacy, while paternal positive induction did not. Moreover, parental monitoring and autonomy granting were not significant predictors of adolescents' general self-efficacy. In the Chilean model, parental monitoring and punitiveness significantly predicted adolescents' general self-efficacy (positively and negatively, respectively), but parental autonomy granting, positive induction, and permissiveness were not significant predictors of adolescents' general self-efficacy.

In terms of the relationship between parenting styles and general self-efficacy, there is variation in how different studies have considered parenting style. For instance, some studies have investigated both maternal and paternal parenting styles, while others have only considered one parent. Overall, although findings are not consistent, it can be concluded that regardless of the type

of parenting strategy, body of research confirming a significant relationship between parenting style and general self-efficacy surpasses those rejecting this link.

3.3.3.3.2 Childhood Abuse and Self-Efficacy

In a study conducted by See May et al. (2022), the mediating roles of forgiveness and self-efficacy in the relationship between childhood maltreatment and treatment motivation was investigated in male drug addicts ($M_{age} = 33.34$, $SD = 7.25$) and it was found that childhood maltreatment, including emotional, physical, and sexual abuse has a significant and negative direct impact on general self-efficacy. Moreover, Haj-Yahia et al. (2021) explored the mediating role of self-efficacy in the relationship between exposure to family violence during childhood and adolescence, and later symptoms of posttraumatic stress disorder among young adults ($M_{age} = 24.9$, $SD = 2.7$). Their findings indicated that experiencing parental violence (including physical violence and psychological aggression) during childhood significantly, negatively, and directly influences young adults' self-efficacy (both general and social self-efficacy). In addition, Cohrdes and Mauz (2020) studied direct and indirect effects of adverse childhood experiences on mental and physical health-related quality of life among young adults ($M_{age} = 25$), considering the mediating role of self-efficacy and emotional stability. The results of their research revealed that childhood sexual abuse has a significant and negative impact on general self-efficacy, while emotional and physical abuse do not. Furthermore, Adjorlolo et al. (2017) studied the influence of childhood maltreatment on psychological functioning among undergraduate university students ($M_{age} = 20$, $SD = 2.77$) and found that physical abuse significantly, negatively, and directly impacts the students' general self-efficacy, while emotional and sexual abuse did not have a significant effect on it. Another study conducted by Lu et al. (2017), explored the mediating effect of self-

concept in the relationship between childhood maltreatment and self-efficacy, and abstinence motivation in drug addicts (age range: 16-58). Their findings showed that physical, emotional, and sexual abuse during childhood have a significant and negative direct effect on addicts' general self-efficacy. Lastly, Soffer et al. (2008) investigated the associations between childhood maltreatment, depressive vulnerability, and self-efficacy among undergraduate students ($M_{\text{age}} = 23.5$, $SD = 1.79$). Their findings indicated that emotional abuse significantly and negatively influences general self-efficacy. However, physical and sexual abuse were not significantly related to general self-efficacy.

To sum up, all the reviewed studies have confirmed not only the significant correlation between childhood abuses and general self-efficacy, but also the influence of early abuse on general self-efficacy. Nevertheless, findings differ in terms of the type of abuse experience.

3.3.3.3 Weight-Related Teasing and Self-Efficacy

In terms of the relationship between weight-related teasing and self-efficacy, all previously conducted studies have only considered physical activity self-efficacy as their dependent variable. Namely, Levers-Landis et al. (2019) studied the relationship between weight-related teasing, sociocultural attitudes towards appearance, and physical activity self-efficacy in obese adolescents ($M_{\text{age}} = 14.59$, $SD = 1.38$). Their findings revealed significant negative relationship between weight-related teasing and physical activity self-efficacy. Moreover, Greenleaf et al. (2014) investigated the relationship between weight-related teasing, psychological well-being, and physical health in school-age children ($M_{\text{age}} = 12.41$, $SD = .97$), and found that participants who had been teased because of their weight, had lower physical activity self-efficacy than who had not been teased. Another study conducted by Losekam et al. (2010), compared the relationship

between physical activity, weight-related teasing, and physical activity self-efficacy among normal-weight and over-weight school-age children ($M_{\text{age}} = 12.22$, $SD = 1.07$), and yielded that in the whole sample, physical activity self-efficacy is significantly and negatively associated with weight-related teasing. Therefore, the relationship between weight-related teasing and general self-efficacy remains uninvestigated.

3.3.3.3.4 Early Maladaptive Schemas and Self-Efficacy

Upon conducting an in-depth search of the academic literature, it became evident that a limited number of studies have focused on investigating the relationship between early maladaptive schemas and self-efficacy. Namely, Hosseinzadeh et al. (2021) studied the mediating role of mindfulness in the relationship between early maladaptive schemas and general self-efficacy among university students (age range: 18-40; the most frequent: 21-25) and found that all five domains of early maladaptive schemas significantly and negatively influence university students' general self-efficacy. Another study conducted by Moghadam et al. (2021) addressed the mediating role of self-esteem in the relationship between perfectionism, early maladaptive schemas, attachment styles, and body image concern among female cosmetic surgery applicants ($M_{\text{age}} = 30.72$, $SD = 4.12$). Results revealed significant and negative correlation between early maladaptive schemas and self-esteem. Moreover, Miklósi et al. (2017) explored the mediating and moderating role of parents' mindfulness in the link between their perceptions of their own early aversive childhood experiences with caregivers and their early maladaptive schemas, and their current level of perceived parenting competence ($M_{\text{age}} = 40.36$, $SD = 6.65$). They found that not only there is significant and negative association between the total score of the Young Schema Questionnaire and the Parental Sense of Competence Scale (which includes a subscale of self-

efficacy), but early maladaptive schemas also significantly and negatively influence parents' sense of competence.

Within the current body of literature, there are few studies specifically dedicated to the (general) self-efficacy construct itself, while more allied constructs such as self-esteem and self-compassion have received greater attention. Nevertheless, the limited amount of existing research on the association between early maladaptive schemas and self-efficacy confirms the significance of this link.

3.3.3.3.5 Body Dissatisfaction and Self-Efficacy

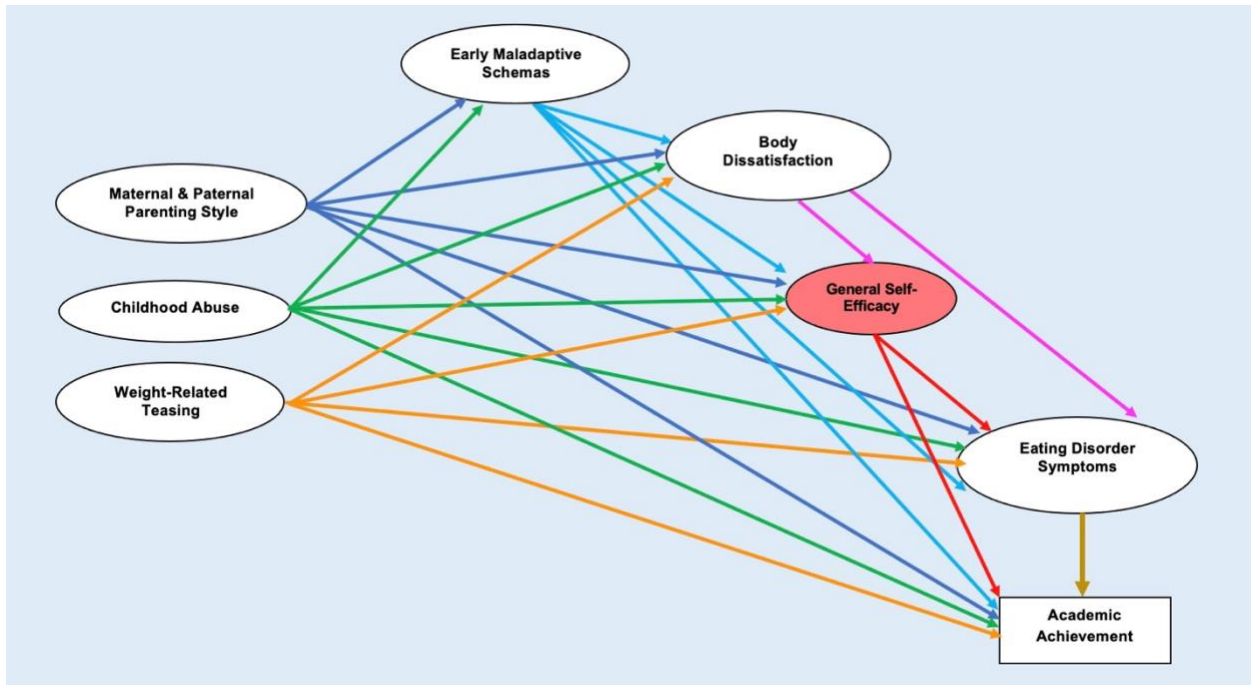
Wang et al. (2023) examined the effectiveness of cognitive bias modification for perfectionism, considering the mediating and moderating roles of body dissatisfaction and self-efficacy among undergraduate female students (18- 25 years old). Findings indicated that body dissatisfaction significantly and negatively predicts general self-efficacy. Moreover, Ouyang et al. (2020) explored the mediating roles of self-efficacy and self-esteem in the relationship between participation in sports and body image among undergraduate students ($M_{age} = 20.91$, $SD = 1.39$), and found that body image has a significant and positive impact on general self-efficacy. Furthermore, Jafary et al. (2011a) investigated the relationships between meaning in life, self-efficacy, body image, and quality of life in menopausal women (45- 55 years old), and their findings indicated that body areas satisfaction is significantly and positively correlated to general self-efficacy.

Overall, according to investigated studies, it may be concluded that body dissatisfaction is significantly correlated to general self-efficacy.

To this stage, it can be argued that based on the available scientific literature, the associations of parenting style, childhood abuse, weight-related teasing, early maladaptive schemas, and body dissatisfaction with general self-efficacy are supported (see Figure 3.4).

Figure 3.4

Variables Related to Self-Efficacy



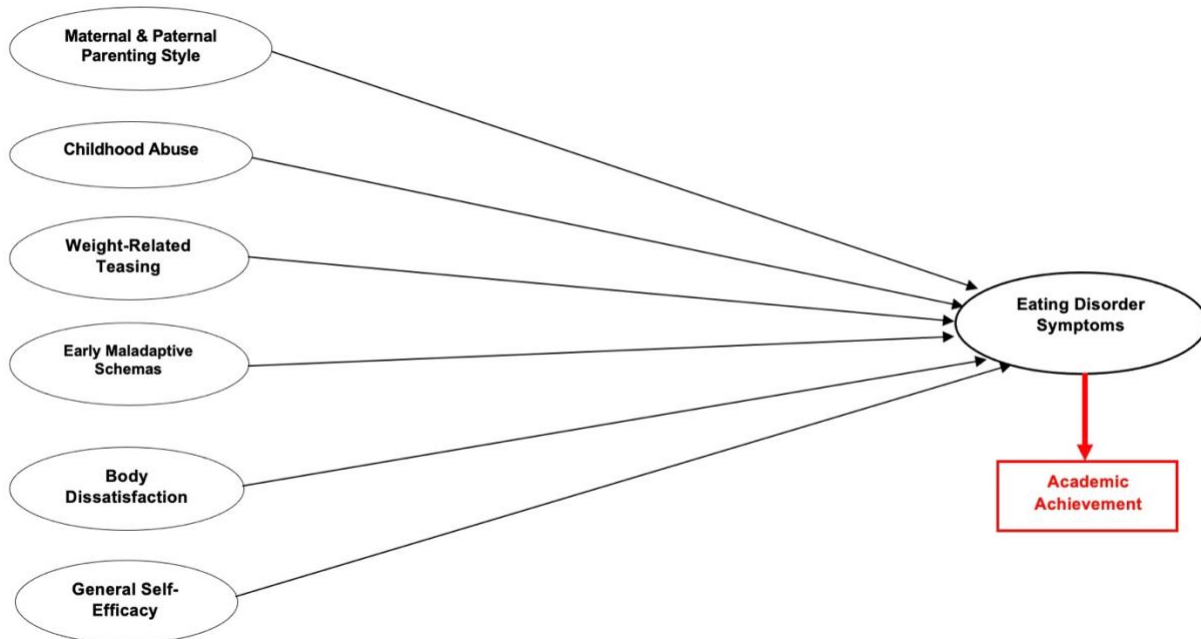
3.4 Summary and Conclusion

Eating disorder symptoms are prevalent among undergraduate university students (Kang et al., 2021), posing a threat to their academic performance (Serra et al., 2020; Yanover & Thompson, 2008) and, subsequently, their future achievements (Rudakov & Roshchin, 2019). Thus, the main purpose of the present review was to synthesize existing academic literature as a theoretical framework for the development of a comprehensive etiology model for eating disorder symptoms and poor academic achievement among undergraduate university students. Therefore, we particularly aimed to 1) collect the scientific research findings on the association between eating disorder symptoms and poor academic achievement, 2) identify existing literature on eating disorder risk factors that are also risk factors for poor academic achievement, and 3) provide scientific evidence supporting the interconnections among shared risk factors for disordered eating and poor academic performance.

Reviewing previously published studies showed that the presence of the symptoms of common eating disorders, namely anorexia nervosa, bulimia nervosa, and binge-eating disorder, is related to students' poor academic achievement both at school and university settings (Adelantado-Renau et al., 2018; Filipova & Stoffel, 2016; Serra et al., 2020; Yanover & Thompson, 2008). Therefore, the academic achievement variable was included in our evolving model as an outcome of disordered eating (see Figure 3.5). However, it is worth noting that most of the research in this regard has been conducted considering the symptoms of bulimia nervosa and binge-eating disorder, and only one study was found addressing the symptoms of anorexia nervosa in relation to academic performance.

Figure 3.5

Academic Achievement Added to the Developing Research Model

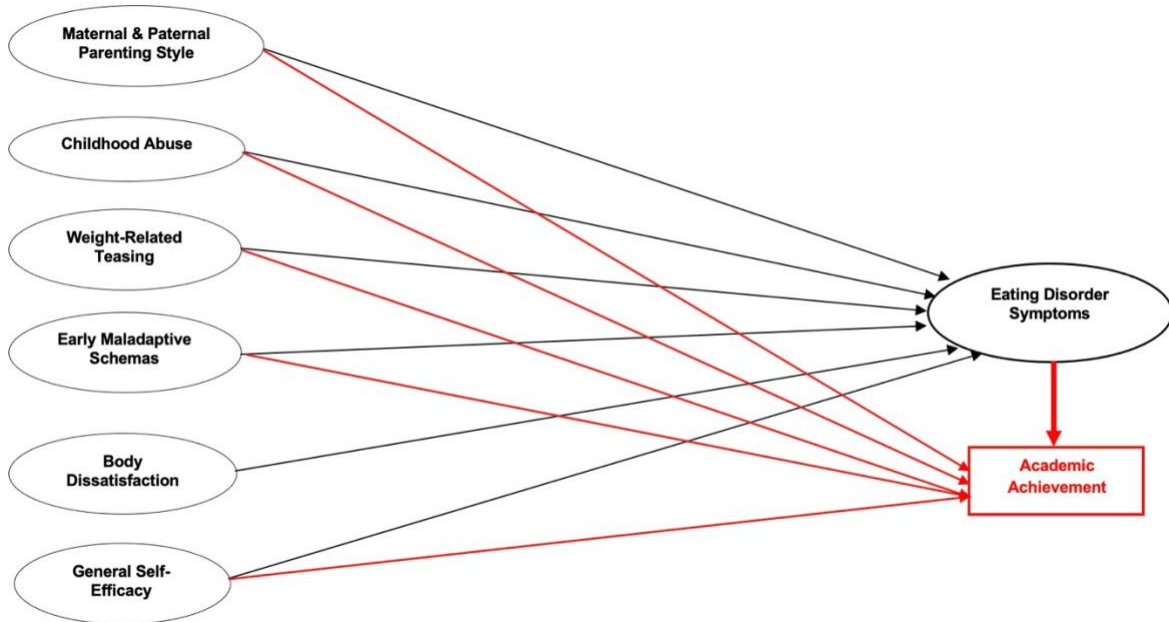


In terms of the common risk factors between disordered eating and poor academic achievement, published studies addressing the relationship between parenting styles, childhood abuse, weight-related teasing, early maladaptive schema domains, general self-efficacy, and academic achievement were investigated. Accordingly, existing findings indicated that among different styles of parenting, the practice of high care, warmth, or responsiveness in addition to low control or demandingness (permissive style) has repeatedly been found not to be correlated with academic achievement (Abar et al., 2009; Kenney et al., 2015; Masud et al., 2016; Turner et al., 2009). However, in terms of other parental strategies namely, authoritarian and authoritative, the body of research presents a relatively balanced perspective, with an approximately equal number of studies both supporting (Kenney et al., 2015; Stavroulaki et al., 2021; Turner et al., 2009) and rejecting

(Abar et al., 2009; Joshi et al., 2003; Masud et al., 2016; Turner et al., 2009) the presence of this link. Nevertheless, in the case of confirmation, it has been established that the adoption of the authoritative style by parents is related to better academic performance, whereas the authoritarian style is associated with worse academic achievement. In terms of the experience of abuse during childhood as a risk factor for subsequent poor academic achievement, while a limited number of studies have failed to establish a significant correlation between these variables (Muwanguzi et al., 2023; Qu et al., 2023; Welsh et al., 2017), there is strong evidence showing that childhood physical, emotional, and sexual abuse are related to poor academic performance (Moore et al., 2020; Pelcovitz et al., 2017; Porche et al., 2011; Slade & Wissow, 2007; Tognin et al., 2023). Concerning the correlation between weight-related teasing victimization and poor academic achievement, it is worth noting that existing research has exclusively focused on adolescent populations. Nevertheless, all conducted studies have consistently confirmed this relationship (Guardabassi et al., 2018; Gunnarsdottir et al., 2012; Krukowski et al., 2009; Lessard et al., 2020, 2021; Lydecker et al., 2023). With respect to the link between early maladaptive schemas and academic achievement, the available literature is relatively scarce. Nonetheless, there is consistent evidence from all these studies that there is a statistically significant association between them (Ahami et al., 2017; Azhari, 2017; Cecero et al., 2008; Chen et al., 2023). Lastly, about the correlation between general self-efficacy and academic achievement, only one study among the reviewed papers reported a non-significant link between these variables (Choi, 2005). Hence it may be firmly suggested that high levels of general self-efficacy are related to enhanced educational performance (Chang & Tsai, 2022; Li et al., 2022; Sucuoğlu, 2018; Yuan et al., 2016). Thus, mentioned associations were added to the model (see Figure 3.6).

Figure 3.6

Certain Risk Factors of Eating Disorders Connected to the Academic Achievement



To address the interrelationships between mentioned mutual risk factors for the onset of eating disorder symptoms and poor academic achievement, an investigation of existing literature on the emergence order of these factors suggests that toxic childhood experiences such as negative parenting styles (Maçık, 2021) and childhood abuses (Feyzioglu et al., 2022) have been previously established as antecedents of early maladaptive schemas, the presence of which significantly impacts the development of body dissatisfaction (Kimball et al., 2019) and low general self-efficacy (Hosseinzadeh et al., 2021), and body dissatisfaction itself is a significant and negative predictor for general self-efficacy (Wang et al., 2023). Furthermore, the mediating role of early maladaptive schemas and body dissatisfaction have previously been examined in the relationship that parenting style and childhood abuse have with disordered eating (Cella et al., 2020; Jones et

al., 2006; Meneguzzo et al., 2021; Williams & Gleaves, 2003). The mediating role of body dissatisfaction have also been previously studied in the association between weight-related teasing and eating disorder symptoms (Benas & Gibb, 2008; 2011; Zimmer-Gembeck et al., 2021). Therefore, this section of our review was classified based on three distinct areas: variables related to 1) early maladaptive schemas, 2) body dissatisfaction, and 3) general self-efficacy.

Accordingly, with respect to the factors related to the development of early maladaptive schemas, an in-depth review of previously conducted studies indicated that, in accordance with the schema therapy approach (Young et al., 2003), parenting styles, especially negative strategies, have been repeatedly found to be correlated with different schemas and schema domains (Gibson & Francis, 2019; Haugh et al., 2017; Maçik, 2021; Salari et al., 2022; Saritas-Atalar & Altan-Atalay, 2020; Shute et al., 2019). Moreover, although research regarding the relationship between being physically abused and early maladaptive schemas is scarce (Boyda et al., 2018; Mojallal et al., 2021), conducted studies have reported that experiencing physical, emotional, or sexual abuse during childhood is correlated with the onset of early maladaptive schemas in all domains (Boyda et al., 2018; Calvete, 2014; Estévez et al., 2016, 2019; Feyzioğlu et al., 2022; Gay et al., 2013; Mojallal et al., 2021; Shojaati et al., 2021).

Regarding associated variables to body dissatisfaction, while the relationship between parenting styles and body dissatisfaction has been extensively explored in prior research, there exists a rather equal numbers of studies confirming (Chen et al., 2020; Cheng & Mallinckrodt, 2009; Coccia et al., 2012; Enten & Golan, 2009; Grenon et al., 2016; Jáuregui Lobera et al., 2011; Krug et al., 2016; Patton, Beaujean, et al., 2014; Pellerone et al., 2017) and rejecting (Cella et al., 2020; Chen et al., 2020; Enten & Golan, 2009; Krug et al., 2016; Maftai, 2023; Slater & Tiggemann, 2016; Taylor et al., 2012) the correlation between positive or negative styles of parenting and body

satisfaction of dissatisfaction. Concerning the correlation between childhood abuse and later body dissatisfaction, although individual studies have demonstrated that being physically, emotionally, or sexually abused in childhood is related to body dissatisfaction (Dunkley et al., 2010; Harned, 2000; Kremer et al., 2013; Talmon & Ginzburg, 2018; Treuer et al., 2005; Williams & Gleaves, 2003), a meta-analysis has determined that while this association does exist, its effect size is quite small (Bödicker et al., 2022). Furthermore, analyzing prior research on the relationship between weight-related teasing victimization and body dissatisfaction showed that there exists a compelling body of evidence indicating that being teased because of weight is related to being dissatisfied with one's own body weight or shape (Benas et al., 2010; Chen et al., 2022; Gleason et al., 2000; Gonzaga et al., 2021; Heijens et al., 2012; Kostanski & Gullone, 2007; Lunner et al., 2000; Reddy & Crowther, 2007; Rodgers et al., 2021; Schaefer & Blodgett Salafia, 2014). Lastly, when considering a synthesis of several prior investigations, it can be concluded that all early maladaptive schema domains are correlated with body dissatisfaction (Boone et al., 2013; Kimball et al., 2019; Krug et al., 2021; Moghadam et al., 2021; Unoka & Vizin, 2017; Van Vlierberghe et al., 2009).

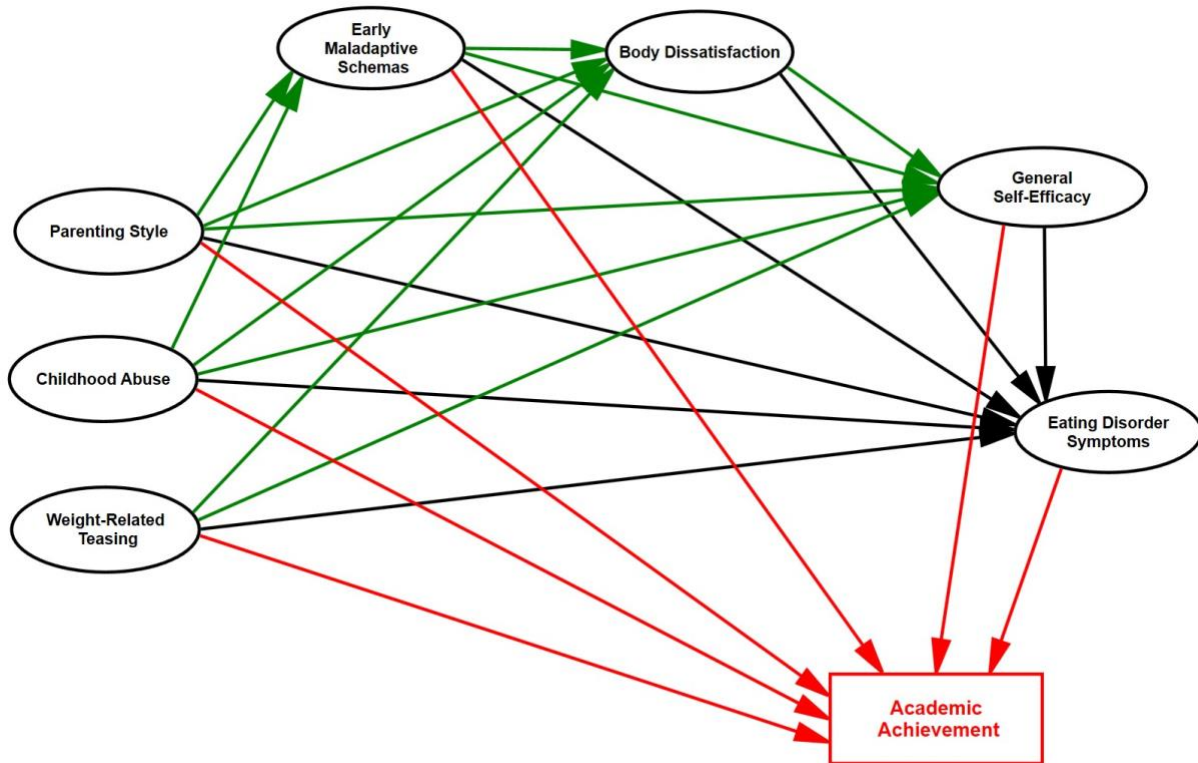
In relation to variables associated with general self-efficacy, the reviewed literature revealed strong support for the correlation between positive and negative parenting styles and, respectively, high and low general self-efficacy in their children (Chen et al., 2020; Guo et al., 2023; Huang et al., 2022; Ingoldsby et al., 2003; Keshavarz & Mounts, 2017; Lim et al., 2003; Siqueira-Campos et al., 2021). Moreover, among the identified articles addressing the relationship between childhood abuse and general self-efficacy, all of them confirmed not only the correlation between these variables but also the negative impact of experiencing different kinds of abuse during childhood on an individual's later general self-efficacy (Adjorlolo et al., 2017; Cohrdes & Mauz,

2020; Haj-Yahia et al., 2021; Lu et al., 2017; See Mey et al., 2022; Soffer et al., 2008). In terms of the association between weight-related teasing and general self-efficacy, it is worth noting that there are limited numbers of studies conducted in this regard, all of which have considered physical activity self-efficacy. However, it has been consistently demonstrated that experiencing teasing due to weight is correlated with diminished self-efficacy, particularly in relation to physical activity (Greenleaf et al., 2014; Ievers-Landis et al., 2019; Losekam et al., 2010). Furthermore, with respect to the relationship between early maladaptive schemas and general self-efficacy, among the limited number of articles found, only one single study specifically investigated the association between schemas and general self-efficacy (Hosseinzadeh et al., 2021), while others explored related constructs within the same domain, such as sense of competence and self-esteem. However, it has been verified by all retrieved studies that the presence of early maladaptive schemas is correlated with low self-efficacy (Hosseinzadeh et al., 2021; Miklósi et al., 2017; Moghadam et al., 2021). Finally, in relation to the link between body dissatisfaction and general self-efficacy, despite the scarcity of research, all existing studies have reported that body dissatisfaction is correlated with low self-efficacy (Jafary et al., 2011; Ouyang et al., 2020; Wang et al., 2023).

Thus, parenting styles, childhood abuses, weight-related teasing, early maladaptive schemas, body dissatisfaction, and general self-efficacy were connected to each other, and our model was formulated (see Figure 3.7).

Figure 3.7

Conceptualized Model for the Etiology of Eating Disorder Symptoms and Academic Achievement



Note. Relationships between eating disorder symptoms and their risk factors have been depicted in black; Connections between academic achievement and its risk factors have been depicted in red; Interrelationships between risk factors have been shown in green.

This study contributes to the existing body of research in several directions: first, it once again highlights the dangerous nature of eating disorders, with particular emphasis on their association with poor educational achievement of young sufferers; second, it underscores the potential existence of risk variables contributing to both disordered eating and poor academic achievement and synthesizes prior quantitative research on the etiology of poor academic achievement in this regard; third, as a key section of an elaborate research project, it provides the fundamental basis for the development of a comprehensive and novel conceptual model for the etiology of eating

disorder symptoms and subsequent poor academic performance; finally, it identifies several gaps in the literature regarding the associations between certain variables, highlighting the need for further investigation. Furthermore, this review draws attention to the importance of considering the academic performance of individuals with eating disorder symptoms. In addition, it may motivate other researchers to focus on the relationships on which there is a paucity of research.

However, there are limitations in this study that warrant further consideration. Specially, due to the narrative nature of this review, a number of studies may have been overlooked. Moreover, in accordance with the objectives of this study, considered risk factors for academic achievement are those that are common between eating disorder symptoms and poor academic performance. Hence, there are many other risk factors for academic achievement that have not been addressed in this review.

Based on what has been said so far, further research is required to examine the effect of anorexia nervosa symptoms, weight-related teasing victimization, and early maladaptive schemas on academic achievement, especially among young adults. Moreover, additional studies that examine the impact of weight-related teasing, early maladaptive schemas, and body dissatisfaction on general self-efficacy will need to be undertaken. Furthermore, the influence of childhood physical abuse on the development of early maladaptive schemas is an important issue for future investigations.

Chapter 4: Second Study

Parental Bonding Instrument: A New Spanish Validation in a Sample of University Students

4.1 Introduction

Since the formulation of pioneering psychological theories such as psychoanalytic and object relations approaches, parent-child interactions have been considered the basis of children's personality development (Schultz & Schultz, 2008). In this regard, Bowlby stated that the inability of parents to establish a warm and close relationship with their children is a crucial predictor of anxiety and other mental disorders in them (Abbaspour et al., 2021; Bretherton, 1992). Hence, he emphasized the extent to which the parent-child bond, formed in childhood, affects children's adult life (Feist et al., 2012). According to the literature, the parental contribution to this bond consists of two principal dimensions: warmth and control (Power, 2013). Parental warmth means parents being supportive, connected, involved, and responsive towards their children (Mounts & Allen, 2019), while parental control refers to demanding parents and their efforts to control and compare their children's behavior with social norms (Bush & Peterson, 2008; Čablová et al., 2014). These attitudes and behaviors lead children to generally understand how their parents think about them and perceive the meaning of their actions (Darling & Steinberg, 1993; Mahrer et al., 2019). Studies have shown that a balanced combination of parental warmth and control can result in the best quality of parent-child interaction, providing the child with major benefits (Baumrind, 1971; García et al., 2018) such as high levels of self-efficacy (Keshavarz & Mounts, 2017), life satisfaction (Lavrič & Naterer, 2020), psychological resilience (Ding et al., 2023), and better academic performance (Checa et al., 2019), whereas parental control without warmth has been reported to harm the child's development in both emotional and behavioral areas (Riany et al., 2022). Accordingly, some evidence shows that mothers who employ much control may cause

depression, anxiety, and eating disorders in their children and high paternal control can boost the risk of high alcohol consumption and agoraphobia in them (Sahithya et al., 2019). Nevertheless, the meaning of these parenting characteristics varies depending on society's culture (Riany et al., 2022). For instance, autonomy and independent behavior are encouraged in individualistic cultures, but in collectivistic cultures parents emphasize obedience (Haslam et al., 2020b; Triandis et al., 1990). Accordingly, given the fundamental role parents play in the overall development of their children (Gibson & Francis, 2019; Maccoby, 1992), various instruments have been developed to assess parenting dimensions, which have been examined in different cultures.

Considering the previously identified concepts of warmth and control and trying to evaluate key characteristics of parental contribution to the parent-child bond, Parker and his colleagues (1979) found "care" and "over-protection" as two fundamental parenting dimensions during developing Parental Bonding Instrument (PBI). PBI is the most common instrument for measuring the quality of parent-child bond worldwide, translated into more than 10 languages and used in multiple cultures (Behzadi & Parker, 2015; Cubis et al., 1989; Gómez-Beneyto et al., 1993; Huang et al., 2020; Kapçı & Küçüker, 2006; Karim & Begum, 2017; Kitamura & Suzuki, 1993; Liu et al., 2011; Mohr et al., 1999; Muhammad et al., 2014; Murphy et al., 1997; Ngai et al., 2018; Qadir et al., 2005; Sato et al., 2021; Suzuki, 2011; Uji et al., 2006). Additionally, its stability has been proved by a twenty-year follow-up research (Murphy et al., 2010).

The authors of PBI emphasized a two-factor structure in developing their instrument and realized that each factor is bipolar; care versus indifference/rejection and control/overprotection versus allowance of autonomy (Parker et al., 1979). Subsequent researchers' preliminary translations concluded that each mentioned pole could form a factor by itself and presented different structures for this measure. One of these early translations was the Spanish version

conducted by Gomez-Beneyto and his colleagues thirty years ago (Gómez-Beneyto et al., 1993). In order to examine the psychometric properties of PBI in a Spanish sample, they asked 205 young Spanish women, who had given birth three days before in a public hospital, to answer a translated version of this questionnaire. According to statistical analyses, the control dimension was split into "Overprotection" and "Restraint" subfactors, a good fit was found for the three-factor model of care, overprotection, and restraint, and two questions were removed due to their insufficient loadings. Therefore, the final Spanish version of PBI consisted of 23 items for each maternal and paternal form (Gómez-Beneyto et al., 1993). Since then, several studies have evaluated diverse two- and three-factor models (Huang et al., 2020; Kapçı & Küşüker, 2006; Karim & Begum, 2017; Kendler, 1996; Kitamura & Suzuki, 1993; Mohr et al., 1999; Murphy et al., 1997; Qadir et al., 2005). Nevertheless, a growing body of research suggests that a four-factor structure can also be compatible to different cultural contexts (Behzadi & Parker, 2015; Huang et al., 2020; Liu et al., 2011; Ngai et al., 2018; Suzuki, 2011; Uji et al., 2006)..

Investigating the influence of parental rearing behaviors on children's mental and physical well-being has recently attracted considerable interest among researchers (Abubakar et al., 2015; Chang et al., 2022; Ding et al., 2023; Feng et al., 2021; Hong & Dyakov, 2021; Mestermann et al., 2023; Nunes et al., 2023; O'Brien et al., 2023; Peng et al., 2021; Selland et al., 2021; Uji et al., 2014; Yaffe & Levental, 2023), and PBI is a well-known tool for evaluating parental strategies. Nevertheless, three decades has passed from its first validation in Spain and the previously employed research sample exhibits a lack of representativeness with regards to the broader societal composition of this country. Hence, to provide future researchers with an updated version of the Spanish PBI, conducting a new validation study seemed essential. Therefore, the primary objective of this study was to evaluate the psychometric properties of the Parental Bonding Instrument

within a novel Spanish sample of young male and female adults. In particular, this research aimed to: 1) identify the underlying factorial structure of the Spanish PBI using a new sample of university students; 2) conduct confirmatory factor analysis (CFA) of all previously reported models for the Parental Bonding Instrument employing a new dataset and then compare the obtained results; and 3) determine an updated model (factorial structure) for the Spanish PBI that best fits the current Spanish cultural values. Furthermore, in this study, we sought to answer this question: using a new Spanish sample, can a four-factor structure be adopted for the Parental Bonding Instrument after three decades?

4.2 Methods

4.2.1 Participants

Participants in this study were 445 volunteer students enrolled in different programs of bachelor's, master's, and Ph.D. degrees in psychology, social education, mathematics, and medicine at the University of Barcelona in 2020-2021. Our convenient sample was 100 percent Spanish and Caucasian. It included individuals between 17 and 35 years old (Mean = 21.73, SD = 3.48) and 79.3% female participants.

Considering the question of this study regarding the possibility of adopting a four-factor structure for the Spanish PBI, the sample size was calculated using a computing website, which conducts a priori sample size analysis for structural equation modeling (Soper, 2022). Consequently, considering 4 latent and 25 observed variables, an average effect size of .3, a power level of .80, and a probability level of .05, the obtained minimum sample size was 241 participants.

4.2.2 Procedure

To collect data for this study, students received a link to an online survey with the authorization of their professors. The survey included the Parental Bonding Instrument, the S-EMBU questionnaire, and some demographic questions regarding participant's gender, age, level, and field of study. By the initial part of this online survey, participants were informed that their participation is entirely confidential and anonymous, and they can withdraw from the study at any time. Their informed consent for participation was also required. As optional information, we asked for participants' email addresses in order to conduct the second part of the study as well as sending them a report about their responses. After a two-week interval, we asked the participants who had provided us with their email addresses to complete the online survey for the second time and sixty-five individuals completed the retest survey. This study was approved by the ethical committee of the University of Barcelona (Institutional Review Board: IRB00003099).

4.2.3 Measures

4.2.3.1 Parental Bonding Instrument (PBI)

The Parental Bonding Instrument (PBI) is a self-report questionnaire comprised of two identical forms: maternal and paternal. Each form consists of 25 questions assessing various attitudes and behaviors of parents as recalled by adult participants during their first 16 years of age. PBI responses are rated on a four-point Likert scale from 0 to 3 (0 = very unlike, 1 = moderately unlike, 2 = moderately like, 3 = very like). In order to evaluate parents' rearing behaviors, PBI has two subscales of care and overprotection/control. The care subscale includes 12 items¹ and 13 items have been dedicated to the overprotection/control subscale (Parker et al., 1979). The care subscale evaluates whether children have received feelings of love and warmth or cold and indifference

¹ The terms "item" and "indicator" refer to questions of an instrument that measure a variable.

from their parents (care versus indifference/rejection). The overprotection items, on the other hand, measure if respondents' parents have denied or encouraged their autonomy and independence (Barton et al., 2021).

Since the Spanish version translated by Gómez-Beneyto and his colleagues (1993) was unavailable, permission was obtained from PBI's main author (Parker) to use the original English version of the Parental Bonding Instrument and translate it into Spanish. Three qualified bilingual psychologists carried out the translation procedure using the techniques recommended by Brislin (1970). Firstly, the original PBI was translated from English into Spanish by a bilingual psychologist. Another bilingual psychologist then completed the backward translation from Spanish to English. Furthermore, a third bilingual psychologist reviewed and compared both the original and translated English versions, confirming their equal meanings. Finally, ten native Spanish bachelor students evaluated and approved the comprehensibility of the final translated Spanish version. In the previous Spanish validation, this questionnaire indicated acceptable internal consistency (ranged from $\alpha = .77$ to $\alpha = .93$). In the current study, as demonstrated in Table 4.3, subscales also showed good internal consistency (ranged from $\alpha = .81$ to $\alpha = .92$).

4.2.3.2 The Short EMBU (S-EMBU)

The S-EMBU (the Swedish acronym for "Egna Minnen Beträffande Uppfostran" [my memories of upbringing]) is a 23-item self-report measure. This scale evaluates parents' rearing behaviors as perceived by their adult children, separately for mother and father. The short version of EMBU was extracted from its original 81-item version for the administration in a shorter time. In this study, the Spanish version of S-EMBU was obtained from Spanish researchers who cooperated in the validation of this tool in Spain (Arrindell et al., 2005).

This instrument consists of three subscales: emotional warmth, overprotection, and rejection. The emotional warmth subscale evaluates if parents are affectionate and praising towards their children. The rejection subscale measures parents' critical and judgmental behaviors (He et al., 2020). Overprotection, on the other hand, refers to parenting behaviors that involve exerting control over children, leading to their anxiety about safety and success (Cheng & Wu, 2021). Seven questions measure the rejection subscale (1, 4, 7, 13, 15, 16, 21), the emotional warmth subscale is evaluated by six items (2, 6, 12, 14, 19, 23), and ten indicators (3, 5, 8, 9, 10, 11, 17, 18, 20, 22) have been dedicated to the assessment of overprotection subscale. Responses are scored using a four-point Likert scale (1 = never, 2 = seldom, 3 = often, and 4 = always) and item 17 is scored reversely. Higher score in each subscale demonstrates a higher level of parent's emotional warmth, overprotection or rejection experienced by children. It is worth noting that while Item 9 was considered an unscaled item during the development of the short EMBU (Arrindell et al., 1999), it is retained in the Spanish validation due to its sufficient factor loading (Arrindell et al., 2005). The validation study of the Spanish version of this questionnaire by Arrindell et al. (2005), showed acceptable internal consistency (ranged from $\alpha = .71$ to $\alpha = .87$). In the present study, subscales also indicated good internal consistency (ranged from $\alpha = .76$ to $\alpha = .89$).

4.3 Statistical Analysis

In this research, all analyses were conducted independently for the paternal and maternal questionnaires using SPSS (version 28.0.1.1) and Amos (version 24.0.0.0). Structural Equation Modeling (SEM) was employed to perform Confirmatory Factor Analysis (CFA) for fourteen previously suggested models in the literature and compare their model fits (see Table 4.2). It is worth noting that Kendler's three-factor model, which used a short 16-item version of the PBI

rather than the original 25-item version, was omitted from this study. Indices to measure model fit in this study included Chi-square/degree of freedom ($\chi^2/d.f$), the Root Mean Square Error of Approximation (RMSEA), the Standardized Root Mean Square Residual (SRMR), and the Comparative Fit Index (CFI). Table 4.1 shows acceptable model fit indices (Hu & Bentler, 1999). Internal consistency and test-retest reliability were also assessed (see Table 4.3) using Cronbach's alpha and Intra-Class Correlation Coefficient (ICC). Furthermore, as shown in Table 4.4, the Pearson correlation coefficient was calculated between the PBI and S-EMBU subscales to assess the concurrent validity of the new Spanish PBI.

Table 4.1*Acceptable Fit Indices*

Fit Indices	Acceptable Values
$\chi^2/d.f$	< 3
RMSEA	<.08
SRMR	<.08
CFI	>.9

4.4 Results**4.4.1 Model Comparison**

In order to determine which model best fits the new dataset, we performed confirmatory factor analysis (CFA) on all formerly proposed models for PBI and subsequently, compared the outcomes. Based on Table 4.2, it is evident that among the two- and three-factor models, only the three-factor model proposed by Sato et al. (2021) demonstrated satisfactory fitness. However, the examination of items' factor loadings in this model indicated that in both maternal and paternal forms, five items of 2, 4, 16, 18, and 24 had negative loadings on the care subscale. Hence, this three-factor model was not a suitable fit for our data. As a result, four-factor models of Behzadi,

Liu, Uji², and Ngai were compared in line with the following steps and the model which best fitted our data was selected:

At first, a glance at Behzadi, Liu, Uji, and Ngai models shows a slight difference between their fit indices, all of which are almost adequate. However, more profound investigation reveals that the values of χ^2/df in Behzadi model are closer to 3 in comparison to Liu, Uji, and Ngai models (maternal form: $\chi^2/df = 2.78$; paternal form: $\chi^2/df = 2.65$). As a result, the Behzadi model was excluded from our comparison.

After eliminating the Behzadi model from our comparison, it can be observed that the fit indices of Liu and Uji models are very similar. However, there is a difference between Uji and Liu models, which makes the Uji one a better fit for our data. In confirmatory factor analysis, standardized loading estimates equal to or higher than .5 are considered acceptable (Hair et al., 2013). Accordingly, in Uji model, questions 2 and 25 should be removed due to their low factor loadings in both maternal and paternal forms. Removing these two questions from the model provides us with two identical maternal and paternal forms. On the other hand, In Liu model, questions 2 and 25 in the maternal form and questions 2, 8, and 25 in the paternal form must be eliminated due to their insufficient loadings. Thus, Liu model will not result in two identical maternal and paternal questionnaires. Despite having good fit indices, the same happens to the Ngai model; in other words, due to low factor loadings, two items of 2 and 25 should be removed from the maternal form, while in the paternal form, three items of 2, 8, and 25 should be eliminated. Thus, the Liu and Ngai models will not result in two identical maternal and paternal questionnaires. Consequently, the four-factor model of Uji best fits our data. Figures 4.1 and 4.2 depict the SEM of the final four-factor model for the maternal and paternal forms (after eliminating items 2 and

² Uji's model refers to the common factorial structure between the studies of Uji (2006), Suzuki (2011), and Huang (2020).

25), according to the modified Uji model. Notably, the translated Spanish PBI has been included in Appendix A.

Table 4.2*Fit Indices of Existing Models for Parental Bonding Instrument*

Models	Factors & Items	Maternal Form				Paternal Form			
		χ^2/df^a	RMSEA ^b	SRMR ^c	CFI ^d	χ^2/df	RMSEA	SRMR	CFI
Parker et al (1979)	Care: 1,2,4,5,6,11,12,14,16,17,18,24								
Kitamura et al (1993)	Overprotection:	3.48	.07	.08	.88	3.24	.07	.08	.88
Qadir et al (2005)	3,7,8,9,10,13,15,19,20,21,22,23,25								
Kapçı et al (2006)	Care/Control: 1,2,3,4,5,6,7,11,12,14,15,16,17,18,21,22,24,25	3.98	.08	.11	.85	3.52	.07	.08	.87
	Overprotection: 8,9,10,13,19,20,23								
Karim & Begum (2017)	Care: 1,2,3,5,6,11,12,14,16,17,21	5.31	.09	.1	.85	5.1	.09	.1	.84
	Overprotection: 8,9,10,15,19,20								
Cubis et al (1989)	Care: 1,2,4,5,6,11,12,14,16,17,18,24								
	Protection-personal domain:	3.69	.07	.08	.86	3.71	.07	.08	.85
	8,10,13,19,23								
	Protection-social domain:								
	3,7,9,15,20,21,22,25								
Gomez-Beneyto et al (1993)	Affect: 1,2,4,5,6,11,12,14,17,18,23	4.68	.9	.09	.84	4.62	.09	.09	.83
	Overprotection: 8,9,13,19,22,25								
	Restraint: 3,7,15,20,21,24								
Murphy et al (1997)	Care: 1,2,4,5,6,11,12,14,16,17,18,24								
	Denial of psychological autonomy:	3.08	.06	.07	.9	2.93	.06	.07	.9
	8,9,13,19,20,23								
	Encouragement of behavioral freedom:								
	3,7,15,21,22,25								
Mohr et al (1999)	Care: 1,2,4,5,6,11,12,14,16,17,18,24								
	Denial of psychological autonomy:	3.06	.06	.07	.89	2.94	.06	.07	.89
	8,9,10,13,19,20,23								
	Encouragement of behavioral freedom:								
	3,7,15,21,22,25								
Qadir et al (2005)	Care: 1,2,4,5,6,11,12,14,16,17,18,24								
	Denial of psychological autonomy:	3.38	.07	.07	.88	3.17	.07	.08	.88
	8,13,19,20,23								
	Encouragement of behavioral freedom:								
	3,9,10,15,21,22,25								
Muhammad et al (2014)	Care: 1,2,5,6,11,12,14,17,18,24								
	Overprotection: 9,10,13,20,23	3.27	.07	.07	.91	2.93	.07	.07	.92
	Autonomy: 7,15,21,22,25								
Sato et al (2021)	Care: 1,2,4,5,6,11,12,16,17,18,24								
	Interference: 8,9,10,13,19,20	2.93	.07	.07	.91	2.73	.06	.07	.92
	Autonomy: 3,15,21,22,25								
	Care: 1,5,6,11,12,14,17								
Behzadi & Parker (2015)	Overprotection: 8,9,10,13,19,20,23	2.78	.06	.07	.92	2.65	.06	.07	.92
	Autonomy: 3,7,15,21,22,25								
	Indifference: 2,4,16,18								
	Care: 1,5,6,11,12,17								
Liu et al (2011)	Overprotection: 8,9,10,19,20,23	2.70	.06	.07	.92	2.47	.06	.07	.93
	Autonomy: 3,7,15,21,22,25								
	Indifference: 2,4,14,16,18,24								
	Care: 1,5,6,11,12,17								
Uji et al (2006), Suzuki (2011), Huang et al (2020)	Overprotection: 8,9,10,13,19,20,23	2.66	.06	.07	.92	2.43	.06	.07	.93
	Autonomy: 3,7,15,21,22,25								
	Indifference: 2, 4,14,16,18,24								
	Care: 1,5,6,11,12,17								
Ngai et al (2018)	Overprotection: 8,9,10,23	2.79	.06	.07	.92	2.47	.06	.07	.93
	Autonomy: 3,7,15,21,22,25								
	Indifference: 2,4,14,16,18,24								

Note. χ^2/df = Chi-square/ degree of freedom; RMSEA = Root mean square error of approximation; SRMR = Standardized root mean square residual; CFI = Comparative fit index.

Figure 4.1

SEM of the Final Four-Factor Model with the Standardized Estimates (Maternal Form)

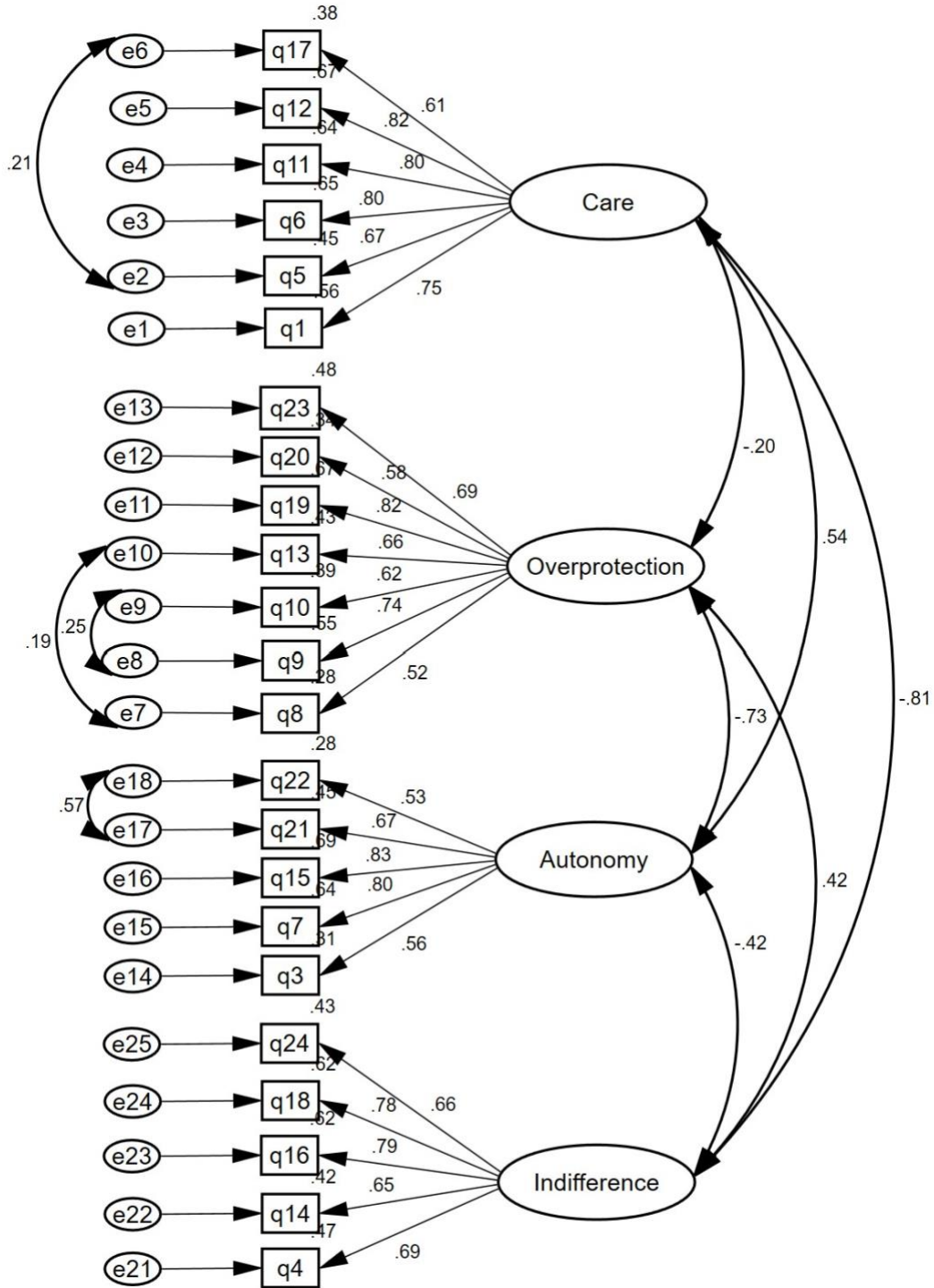
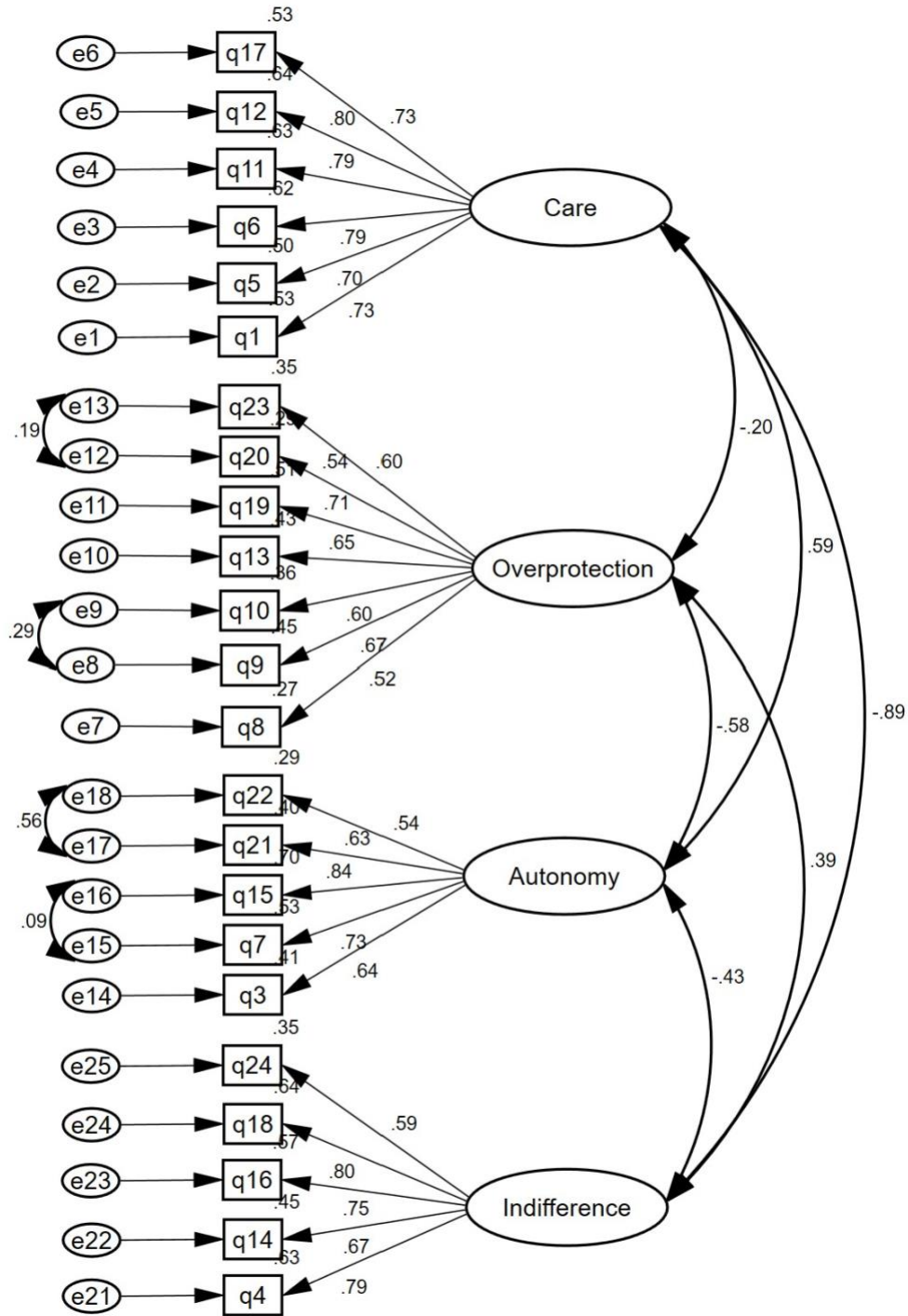


Figure 4.2

SEM of the Final Four-Factor Model with the Standardized Estimates (Paternal Form)



4.4.2 Internal Consistency and Test-Retest Reliability

The internal consistency and test-retest reliability of our four-factor model was evaluated using Cronbach's alpha and Intra-Class Correlation Coefficient (ICC). According to Table 4.3, the Cronbach's alpha coefficients ranged from .83 to .90 in the maternal and from .81 to .90 in the paternal form. Furthermore, in this study, the factors' ICC ranged from .90 to .92 in the maternal and from .84 to .95 in the paternal form.

Table 4.3

Internal Consistency and Test-Retest Reliability

Coefficients	Maternal form				Paternal form			
	Care	Overprotection	Autonomy	Indifference	Care	Overprotection	Autonomy	Indifference
Cronbach's Alpha (Test)	.90	.83	.87	.89	.89	.81	.82	.90
Cronbach's Alpha (Retest)	.92	.89	.87	.88	.92	.83	.90	.88
ICC (%95 CI)	.91	.92	.90	.90	.95	.84	.87	.94

4.4.3 Concurrent Validity

To assess the concurrent validity of the new Spanish PBI, the Pearson correlation coefficient was calculated between the subscales of PBI and S-EMBU. As displayed in Table 4.4, concerning the maternal forms, there was a significant positive relationship between the emotional warmth subscale of S-EMBU and the PBI's care ($r = .81, p < .01$), a significant negative relationship between emotional warmth and overprotection ($r = -.30, p < .01$), a significant positive relationship between emotional warmth and autonomy ($r = .41, p < .01$), and a significant negative relationship between emotional warmth and indifference ($r = -.80, p < .01$). The S-EMBU's subscale of overprotection was significantly and negatively related to care ($r = -.18, p < .01$) and autonomy (r

= -.65, $p < .01$), and significantly and positively related to overprotection ($r = .63$, $p < .01$) and indifference ($r = .20$, $p < .01$) subscales of PBI. There was also a significant negative relationship between the rejection subscale of S-EMBU and PBI's care ($r = -.68$, $p < .01$) and autonomy ($r = -.40$, $p < .01$), and a significant positive relationship between the S-EMBU's rejection and PBI's overprotection ($r = .27$, $p < .01$) and indifference ($r = .61$, $p < .01$).

Regarding the paternal forms, the emotional warmth subscale of S-EMBU was significantly and positively related to care ($r = .83$, $p < .01$) and autonomy ($r = .38$, $p < .01$), and significantly and negatively associated with overprotection ($r = -.22$, $p < .01$) and indifference ($r = -.81$, $p < .01$) subscales of PBI. The overprotection subscale of the S-EMBU was significantly and positively related to overprotection ($r = .56$, $p < .01$) and significantly and negatively related to autonomy ($r = -.51$, $p < .01$) subscale of PBI. However, no significant correlation was observed between the overprotection subscale of S-EMBU and the care and indifference subscales of PBI ($p > .05$). The rejection subscale of S-EMBU was significantly and negatively associated with the care ($r = -.57$, $p < .01$) and autonomy ($r = -.45$, $p < .01$) and significantly and positively associated with overprotection ($r = .31$, $p < .01$) and indifference ($r = .55$, $p < .01$) subscales of PBI.

Table 4.4

Pearson Correlation Coefficients between PBI and S-EMBU Subscales

		PBI								
		Maternal Form				Paternal Form				
		Care	Overprotection	Autonomy	Indifference	Care	Overprotection	Autonomy	Indifference	
S-EMBU	Maternal Form	Emotional Warmth	.81*	-.30*	.41*	-.80*				
		Overprotection	-.18*	.63*	-.65*	.20*				
		Rejection	-.68*	.27*	-.40*	.61*				
	Paternal Form	Emotional Warmth					.83*	-.22*	.38*	-.81*
		Overprotection					-.02	.56*	-.51*	.06
		Rejection					-.57*	.31*	-.45*	.55*

Note. Coefficients between homologous scales have been demonstrated in bold; * $p < .01$.

4.5 Discussion

The main objective of this research was to assess the psychometric properties of the Parental Bonding Instrument in a new Spanish sample of young male and female adults, after thirty years since the previous validation of this tool in Spain. To this end, using a new dataset, confirmatory factor analysis was performed for two-, three-, and four-factor models yielded from previously published studies to identify the factorial structure of the Spanish PBI and present a revised and up-to-date version of this instrument. In addition, given that the last Spanish PBI revealed a three-factor structure, in this study we intended to investigate whether a four-factor structure is compatible with the new Spanish PBI. Our findings showed that after the span of three decades, it seems that four-factor models fit better than two- and three-factor models for the Spanish Parental Bonding Instrument. In particular, the Uji four-factor model of care, overprotection, indifference, and autonomy (Uji et al., 2006) indicated the best fit to our data. Thus, the question of this research was positively answered.

Other studies validating the PBI in different countries, have also identified four-factor models regardless of the number of items. Namely, in the most recent study, Huang and colleagues (2020) validated the PBI in a sample of 7 to 18 years old Canadians and a four-factor model of care, overprotection, autonomy, and indifference showed the best fit to their data. Moreover, Behzadi and Parker (2015), with the aim of validating this tool in Iran, achieved a four-factor model and one question was omitted from both maternal and paternal forms, due to its low factor loading. In another research conducted by Suzuki and his colleagues (2011), a four-factor model, previously suggested by Uji and his colleagues (2006), was tested in a larger Japanese sample. The results of their study confirmed the Uji four-factor model with the same twenty-three items (items 2 and 25 were removed because of their insufficient factor loadings). Another PBI validation was

undertaken by Liu et al. (2011), whose objective was to investigate the factorial structure of this measure in China. They also reached a four-factor model of care, over-protection, indifference, and autonomy, and item 13 was eliminated because of its low factor loading. Therefore, in terms of the number of factors, the result of our study is in line with previous research conducted in other cultures.

Moreover, our findings indicated elevated Cronbach's alpha coefficients in both maternal and paternal forms of the Parental Bonding Instrument, indicating a strong level of internal consistency for the new Spanish PBI, which is consistent with previously reported findings (Behzadi & Parker, 2015; Gómez-Beneyto et al., 1993; Huang et al., 2020; Kapçi & Küçüker, 2006; Karim & Begum, 2017; Mohr et al., 1999; Murphy et al., 1997; Ngai et al., 2018; Qadir et al., 2005; Sato et al., 2021).

The S-EMBU is another frequently used instrument for assessing positive and negative parenting dimensions and has been considered very similar and even interchangeable with PBI (Arrindell & Engebretsen, 2000). As a result, the S-EMBU was employed to examine the convergent and divergent validity of the new four-factor Spanish PBI. Accordingly, our results showed that, in both maternal and paternal forms, the homologous scales were strongly correlated and the convergent validity of the new four-factor Spanish PBI was confirmed. Furthermore, in both maternal and paternal forms, the S-EMBU's rejection subscale was significantly and negatively related to PBI's care and autonomy subscales, indicating the divergent validity of this updated Spanish version. On the other hand, the overprotection subscale of S-EMBU and the PBI's care subscale were not significantly associated, which is in accordance with the result of previous research examining the convergent validity of S-EMBU and PBI (Arrindell & Engebretsen, 2000).

Parental Bonding Instrument is a well-known measure for the evaluation of parental contribution to the parent-child bond and its high internal consistency, good test-retest reliability, and validity has been confirmed in many cultures (Murphy et al., 2010). However, in different cultures, principal dimensions of parenting, namely warmth/care and control/overprotection, are considered differently (Chen et al., 2019). For instance, in horizontal collectivistic cultures such as Spain, where the "self" is considered part of a larger group (family) organized based on equality rather than hierarchy, the practice of strictness and control for training socialization methods in children are perceived harmful, while much emphasis is placed on love, acceptance, and teaching appropriate social behaviors (García & Gracia, 2014).

Based on the theory of social change and human development, there is a prevailing global pattern in which sociodemographic characteristics shift from *Gemeinschaft* (characterized by rural settings, lower economic status, and limited educational attainment) to *Gesellschaft* (characterized by urbanization, higher economic status, and more educational attainment). Consequently, since cultural values are adjusted to sociodemographic ecologies, in fact, a transition from collectivism to individualism is being occurred (Bi et al., 2020; Greenfield, 2009). In other words, due to global modernization, traditional values of societies have absorbed new cultural values, which has led collectivist societies increasingly encourage independency and vice versa (Chen et al., 2019). As a result, within a cultural context, parenting goals and behaviors have also changed over time. For instance, Bianchi (2016) found that the significance of autonomy encouragement increased in *Gemeinschaft* and decreased during *Gesellschaft*. Moreover, according to Zhou et al. (2018), perceived child autonomy and familial support have increased, whereas child obedience has decreased across generations. Furthermore, Park et al. (2014) have reported that today's parents emphasize more on children's independence and less on obedience compared to prior generations.

Interestingly, research has indicated that, in comparison to last two generations, current Spanish parents are less strict and more connected with their children; in other words, they show more warmth and employ less control in their parenting practice (García et al., 2018). Hence, a new four-factor structure for an instrument of parenting strategies, rather than three factors within the same culture, may serve as an empirical support for how parenting behaviors change in tandem with society's alterations. This finding introduces an additional dimension to a crucial aspect of an individual's existence, namely parenting behaviors. Thus, it is essential for parents to acknowledge various dimensions of their parenting behaviors and attitudes, as well as the degree to which these actions and attitudes might impact the development of children's character, as this awareness plays a significant role in regulating and enhancing these parental rearing styles.

By sharing this new knowledge with educational environments, we can help raising awareness of these centers to develop better strategies for monitoring children's and parents' behaviors, determining the cause of children's problems, and assisting in their resolution. In addition, the findings of this study have the potential to refine macro-plans for instructing parents, as only through education the importance and scope of parenting and its impact on children can be addressed. Moreover, future Spanish researchers can employ the new four-factor version of Spanish PBI to conduct more in-depth evaluations of statistical models based on complex pathological hypotheses.

However, there are some limitations to this study that should be outlined: Firstly, since participation in this study required completing both maternal and paternal forms, individuals whose one parent was absent from their lives could not participate in the research. Secondly, this study was conducted as part of a broader research project and its target population was Spanish university students aged 17 to 35, which could not be fully reached. Consequently, 17-35-year-old

Spanish university students in different faculties of the University of Barcelona were considered a subset to be the study population. Therefore, given Spain's geographical and cultural diversities, additional research is needed to examine the psychometric properties of PBI using a sample of participants from various regions of the country. Moreover, future researchers are encouraged to employ a larger sample (consisting of subjects from various regions) and divide it into two equal sections for exploratory factor analysis on one part and the confirmatory factor analysis on the other.

To sum up, the current study contributes new information to the existing body of literature on the validation of a widely used instrument for the investigation of parent-child relationships, presents an updated Spanish PBI, and once again, highlights the reliability and validity of this questionnaire for future researchers who are interested in examining the quality of the parental bond as a dependent, independent, mediating, or moderating variable.

Chapter 5: Third Study

Testing a New Comprehensive Model for Eating Disorder Symptoms and Academic Achievement Among Spanish and Iranian Undergraduates: The Relationships Between Parenting Style, Childhood Abuse, Weight-Related Teasing, Sociocultural Attitudes Towards Appearance, Early Maladaptive Schemas, Body Image, and Self-Efficacy

5.1 Introduction

Recent research has demonstrated that individuals with eating disorders may experience a reduction in their lifespan by approximately 17 years compared to the average lifespan of the general population (Chan et al., 2023). People with anorexia or bulimia nervosa face a mortality risk that exceeds five times that of those without eating disorders (van Eeden et al., 2021b). Moreover, the mortality rate in individuals with self-reported eating disorder has been yielded to be remarkably higher than that of other self-reported disorders (Pedram et al., 2021).

In the past four decades, there has been a consistent rise in the quantity of academic publications dedicated to the study of eating disorders (Park & Kim, 2022), with risk factors being the primary focus of research in this field (Almenara, 2022). This growing body of literature that highlights numerous variables as contributors to the development of eating disorders has led to several reviews that have been undertaken to identify the frequently studied risk factors. Namely, Pennesi and Wade (2016a) conducted a systematic review of the literature on the various models proposed for eating disorders' etiology and identified body dissatisfaction, low self-efficacy, family interactions, peers' and media pressures to be thin, and maladaptive cognitions as being among fundamental variables that have been repeatedly suggested as risk factors for the onset of eating disorder symptoms. Subsequently, Dakanalis et al. (2017) addressed the factors involved in both the development and persistence of DSM-5-based eating disorder symptoms in young female college students and found shape and weight concern to be the most important contributor to the

initiation and maintenance of eating disorder symptoms. A few years later, an umbrella review of prior meta-analyses concerning the risk factors for eating disorders was carried out by Solmi et al. (2021), who found childhood sexual abuse and teasing victimization as the most important risk factors for the development of eating disorder symptoms. Recently, in a rapid review conducted by Barakat et al. (2023), it was concluded that family dynamics, encompassing parenting features and the quality of the parent-child relationship, along with early experiences of trauma and abuse, body image concern, and social and media pressures, have been extensively documented as risk factors for the emergence of eating disorder symptoms. Therefore, the existing body of research concerning the risk factors for eating disorders conclusively suggests that parenting strategies, experiencing abuse during childhood, teasing victimization, external pressures (especially media and peers' pressures to be thin), maladaptive cognitions, body dissatisfaction, and diminished self-belief are widely recognized as established risk factors for eating disorder symptoms.

When considering the role of external forces on the emergence of disordered eating, it is essential to acknowledge the impact of culture, since it has been found to be linked with an individual's mental health (Gao et al., 2022). Particularly, in the area of eating disorders, almost four decades ago, researchers investigating the characteristics of anorexia and bulimia nervosa recognized that these disorders are influenced by culture, fitting the description of culture-bound syndromes; in other words, these disorders mostly occur within certain cultural contexts (Keel & Klump, 2003; Swartz, 1985). Accordingly, it was later reported that risk factors associated with eating disorders may only serve as significant contributors within specific cultures (Tomiyama & Mann, 2008). Research also indicated that immigrating from one cultural context to another can influence an individual's eating patterns and may lead to the emergence of eating disorder symptoms (Shekriladze et al., 2019). Moreover, the relationship between eating disorder risk

factors and symptoms has been found to be influenced by collectivism-individualism cultural values (Salami et al., 2019). Consequently, the recognition of culture's importance in the realm of eating disorders has prompted to development of culture-specific recommendations aimed at optimizing treatment outcomes for individuals with disordered eating (Acle et al., 2021).

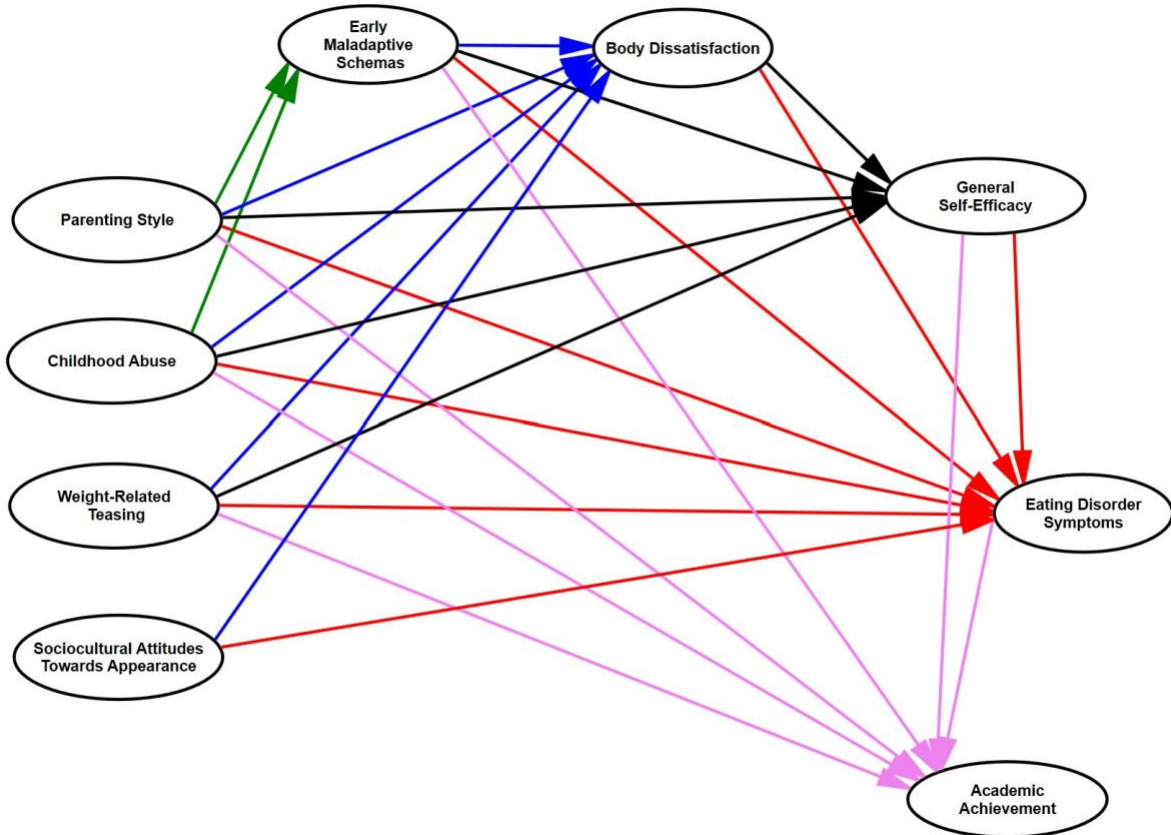
It is now well established from a variety of studies that eating disorders can be observed in both genders and across all age groups (Hadjigeorgiou et al., 2018; López-Gil et al., 2023; Mangweth-Matzek et al., 2023; Silén & Keski-Rahkonen, 2022b; Udo & Grilo, 2022). However, recent evidence suggests that in Western societies, between 6 and 18 percent of women and 2% of men aged 30 or younger suffer from eating disorders (Silén & Keski-Rahkonen, 2022b). Particularly, undergraduate university students have been recognized as a high-risk group for developing eating disorders (Daly & Costigan, 2022), whose academic achievement is significantly associated with their symptoms such as binge-eating, purging, and symptoms of anorexia and bulimia nervosa (Filipova & Stoffel, 2016; Serra et al., 2020a; Yanover & Thompson, 2008b).

An in-depth investigation of studies conducted on the antecedents of poor academic achievement revealed that disordered eating and poor academic achievement, surprisingly, have certain risk factors in common. To be exact, there is evidence showing that the authoritarian and authoritative parenting styles (Kenney et al., 2015; Stavroulaki et al., 2021a), childhood physical, emotional, and sexual abuse (Moore et al., 2020; Pelcovitz et al., 2017; Porche et al., 2011; Slade & Wissow, 2007; Tognin et al., 2023), weight-related teasing (Guardabassi et al., 2018; Gunnarsdottir et al., 2012; Krukowski et al., 2009; Lessard et al., 2020, 2021; Lydecker et al., 2023), early maladaptive schemas (Ahami et al., 2017; Azhari, 2017; Cecero et al., 2008; Chen et al., 2023), and general self-efficacy (Chang & Tsai, 2022; Li et al., 2022; Sucuoğlu, 2018; Yuan et al., 2016) are significantly related to poor academic achievement.

Although several studies have separately explored factors which increase the risk of disordered eating and poor academic achievement examining the direct and indirect relationships, up to now, no attempt has been made to target the vulnerable population of undergraduate university students from different cultural backgrounds for proposing and evaluating a comprehensive model that integrates the direct and indirect associations between a) well-known risk factors for eating disorders (some of which have been reported to also serve as risk factors for poor academic achievement), b) eating disorder symptoms, and c) academic achievement. Thus, to address this gap in the literature, a detailed model was conceptualized (see Figure 5.1), in which early maladaptive schemas, body dissatisfaction, and general self-efficacy were considered mediators in the relationship between parenting styles, childhood abuse, weight-related teasing, sociocultural attitudes towards appearance (peers and media pressures to be thin), and symptoms of eating disorders and academic achievement. In the following paragraphs, we will address the foundations upon which the aims and hypotheses of this study were formulated within the proposed model.

Figure 5.1

Complete Proposed Research Model

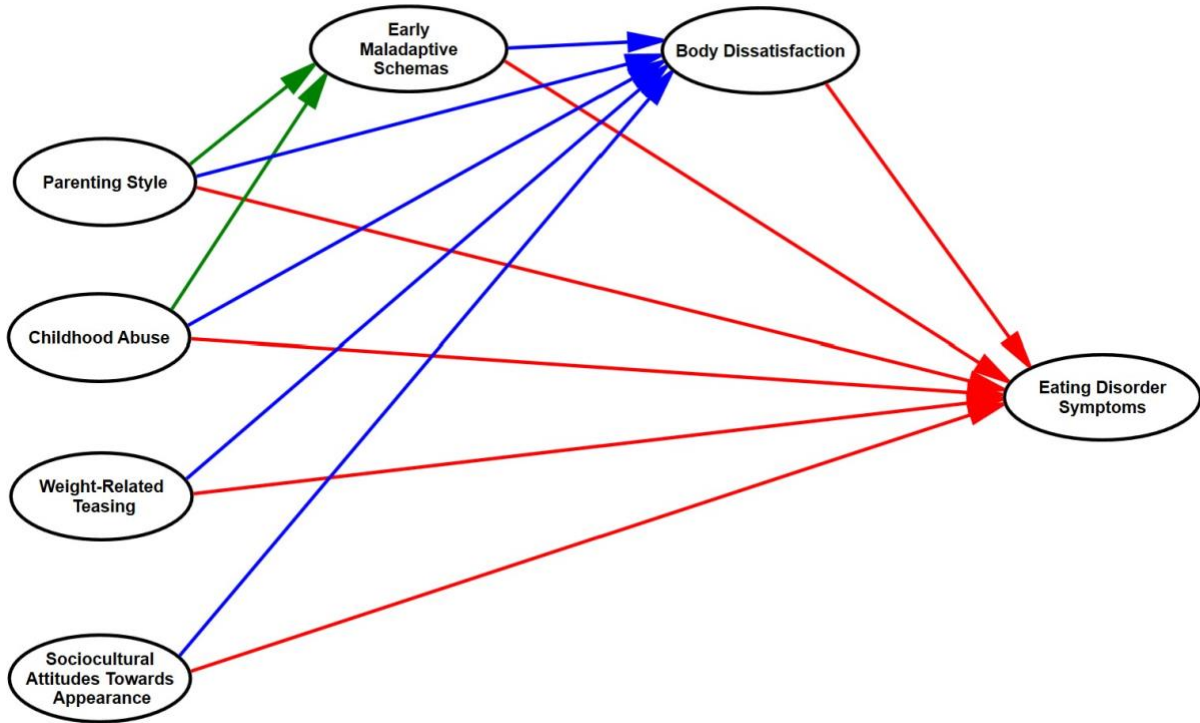


As Mentioned before, according to the academic literature, parenting styles, childhood abuses, weight-related teasing, sociocultural attitudes towards appearance (peers and media pressures), early maladaptive schemas, body dissatisfaction, and general self-efficacy are among the key risk factors for the development of eating disorders (see red arrows in Figure 5.1) (Barakat et al., 2023; Dakanalis et al., 2017; Pennesi & Wade, 2016b; Solmi et al., 2021). Moreover, these risk factors are interestingly interconnected. To be exact, parenting styles (Maçik, 2021; Salari et al., 2022b; Saritas-Atalar & Altan-Atalay, 2020) and childhood abuse (Feyzioglu et al., 2022; Mojallal et al., 2021b; Shojaati et al., 2021) are significantly linked to the development of early maladaptive

schemas (see green arrows in Figure 5.2). Furthermore, parenting styles (Chen et al., 2020; Grenon et al., 2016; Pellerone et al., 2017), childhood abuse (Kremer et al., 2013; Talmon & Ginzburg, 2018; Treuer et al., 2005), weight-related teasing (Chen et al., 2022; Gonzaga et al., 2021; Rodgers et al., 2021), sociocultural attitudes towards appearance (Ahmadpanah et al., 2019; Eshak et al., 2020; Lewis-Smith et al., 2020), and early maladaptive schemas (Kimball et al., 2019b; Krug et al., 2021; Moghadam et al., 2021c) are significantly associated with body dissatisfaction (see blue arrows in Figure 5.2). On the other hand, early maladaptive schemas and body dissatisfaction have previously been considered mediators in the effects of parenting style and childhood abuse on eating disorder symptoms (Cella et al., 2020; Jones et al., 2006; Meneguzzo et al., 2021; Williams & Gleaves, 2003b). Body dissatisfaction has also been previously considered mediator in the effects of weight-related teasing and external pressures on the development of eating disorder symptoms (Benas & Gibb, 2008; Blodgett Salafia & Gondoli, 2011; Zimmer-Gembeck et al., 2021). Accordingly, the first general objective of this study was to examine the mediating roles of early maladaptive schemas and body dissatisfaction in the effects of parenting style, childhood abuse, weight-related teasing, and sociocultural attitudes towards appearance (peer and media pressures) on eating disorder symptoms. In accordance with this general objective, we particularly aimed to a) examine the mediating roles of early maladaptive schemas and body dissatisfaction in the relationship between parenting style and eating disorder symptoms, b) examine the mediating roles of early maladaptive schemas and body dissatisfaction in the relationship between childhood abuse and eating disorder symptoms, and c) examine the mediating role of body dissatisfaction in the relationships that weight-related teasing and sociocultural attitudes towards appearance have with eating disorder symptoms (see figure 5.2).

Figure 5.2

A Section of the Proposed Model Related to the First General Objective



Hence, we hypothesized that:

- **H1a-d: Early Maladaptive Schema Domains (EMSD) and Body Dissatisfaction (BD) Mediate the Effect of Parenting Style (PS) on Eating Disorder Symptoms (EDS).**
 - H1a:** EMSD mediate the effect of PS on EDS.
 - H1b:** BD mediates the effect of PS on EDS.
 - H1c:** EMSD and BD sequentially mediate the effect of PS on EDS.
 - H1d:** EMSD mediate the effect of PS on BD.
- **H2a-e: Early Maladaptive Schema Domains (EMSD) and Body Dissatisfaction (BD) Mediate the Effect of Childhood Abuse (CA) on Eating Disorder Symptoms (EDS).**
 - H2a:** EMSD mediate the effect of CA on EDS.
 - H2b:** BD mediates the effect of CA on EDS.
 - H2c:** EMSD and BD sequentially mediate the effect of CA on EDS.

H2d: BD mediates the Effect EMSD on EDS.

H2e: EMSD mediate the effect of CA on BD.

- **H3a-b: Body Dissatisfaction (BD) Mediates the Effects of Weight-Related Teasing (WT) and Sociocultural Attitudes Towards Appearance (SCATA) on Eating Disorder Symptoms (EDS).**

H3a: BD mediates the effect of WT on EDS.

H3b: BD mediates the effect of SCATA on EDS.

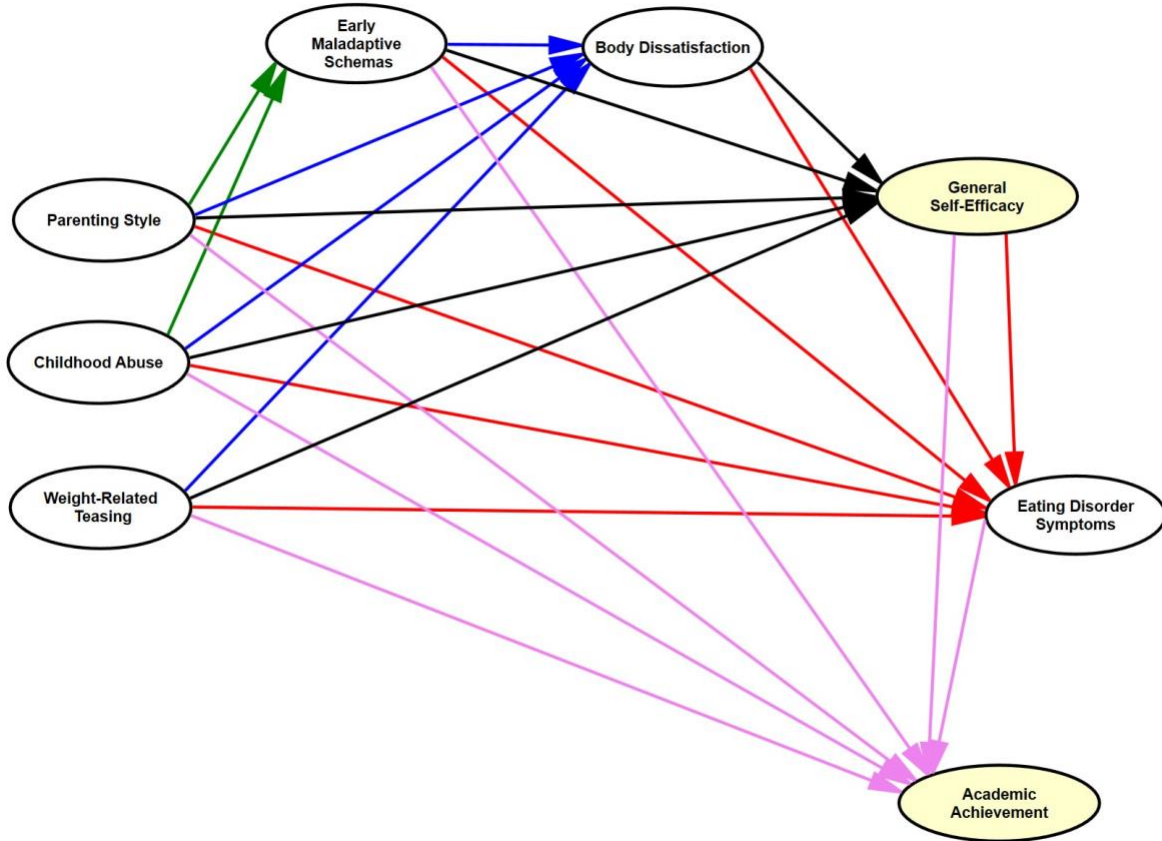
Now, we will proceed to the second general objective of the current study:

In addition to mentioned reported relationships in Figure 5.2, as discussed before, research has found that parenting styles (Kenney et al., 2015; Stavroulaki et al., 2021a), childhood abuse (Moore et al., 2020; Pelcovitz et al., 2017; Porche et al., 2011; Slade & Wissow, 2007; Tognin et al., 2023), weight-related teasing (Guardabassi et al., 2018; Gunnarsdottir et al., 2012; Krukowski et al., 2009; Lessard et al., 2020, 2021; Lydecker et al., 2023), early maladaptive schemas (Ahami et al., 2017; Azhari, 2017; Cecero et al., 2008; Chen et al., 2023), and general self-efficacy (Chang & Tsai, 2022; Li et al., 2022; Sucuoğlu, 2018; Yuan et al., 2016) are significantly related to academic achievement (see pink arrows in Figure 5.3). Moreover, parenting styles (Guo et al., 2023; Huang et al., 2022), childhood abuse (Cohrdes & Mauz, 2020; Haj-Yahia et al., 2021; See Mey et al., 2022), weight-related teasing (Greenleaf et al., 2014; Ievers-Landis et al., 2019), early maladaptive schemas (Hosseinzadeh et al., 2021a; Miklósi et al., 2017), and body dissatisfaction (Ouyang et al., 2020; Wang et al., 2023) are significantly correlated to self-efficacy (see black arrows in Figure 5.3), which has been extensively studied in the area of academic achievement (Al-Abyadh & Abdel Azeem, 2022; Chang & Tsai, 2022; Choi, 2005; Li et al., 2022; Li et al., 2022; Sucuoğlu, 2018; Yuan et al., 2016). Furthermore, the indirect effect of parenting styles (Amani et al., 2020; Dámaso-Flores & Serpa-Barrientos, 2022), childhood abuse (Qu et al., 2023), and weight-related

teasing (Guardabassi et al., 2018) on academic achievement have been previously evaluated. Accordingly, the second general objective of this study was to examine the mediating roles of early maladaptive schemas, body dissatisfaction, general self-efficacy, and eating disorder symptoms in the effects of parenting style, childhood abuse, and weight-related teasing on academic achievement. In fact, since studies have identified low self-efficacy as one of the risk factors for the emergence of eating disorder symptoms (Aynehchi et al., 2023; Dehghan et al., 2022) and poor academic achievement (Al-Abyadh & Abdel Azeem, 2022; Chang & Tsai, 2022), and disordered eating, in turn, is significantly related to the academic performance (Filipova & Stoffel, 2016; Serra et al., 2020b; Yanover & Thompson, 2008b), in the second general objective, eating disorder symptoms were also considered a mediator (see Figure 5.3).

Figure 5.3

A Section of the Proposed Model Related to the Second General Objective



Note. In comparison to Figure 5.2 (the first general objective), in this Figure (the second general objective), the sociocultural attitudes towards appearance construct has been excluded, and two new variables of general self-efficacy and academic achievement (which have been shown in yellow) as well as black and pink arrows, have been added to the model.

In line with this second general goal, we particularly aimed to a) examine the mediating roles of early maladaptive schemas, body dissatisfaction, and eating disorder symptoms in the relationship between parenting style and academic achievement, b) examine the mediating roles of early maladaptive schemas, body dissatisfaction, and eating disorder symptoms in the relationship between childhood abuse and academic achievement, c) examine the mediating roles of body dissatisfaction, and eating disorder symptoms in the relationship between weight-related

teasing and academic achievement, d) examine the mediating roles of early maladaptive schemas and general self-efficacy in the relationship between parenting styles, childhood abuse and academic achievement, and to e) examine the mediating roles of body dissatisfaction and general self-efficacy in the relationships that childhood abuse and weight-related teasing have with academic achievement. Thus, we proposed the following hypotheses:

- **H4a-d: Early Maladaptive Schema Domains (EMSD), Body Dissatisfaction (BD), and Eating Disorder Symptoms (EDS) Mediate the Effect of Parenting Style (PS) on Academic Achievement (AA).**
 - H4a:** EMSD, BD, and EDS sequentially mediate the effect of PS on AA.
 - H4b:** EMSD mediate the effect of PS on AA.
 - H4c:** EDS mediate the effect of PS on AA.
 - H4d:** BD and ED sequentially mediate the effect of PS on AA.

- **H5a-d: Early Maladaptive Schema Domains (EMSD), Body Dissatisfaction (BD), and Eating Disorder Symptoms (EDS) Mediate the Effect of Childhood Abuse (CA) on Academic Achievement (AA).**
 - H5a:** EMSD, BD, and EDS sequentially mediate the effect of CA on AA.
 - H5b:** EMSD mediate the effect of CA on AA.
 - H5c:** EDS mediate the effect of CA on AA.
 - H5d:** BD and ED sequentially mediate the effect of CA on AA.

- **H6a-b: Body Dissatisfaction (BD) and Eating Disorder Symptoms (EDS) Mediate the Effect of Weight-Related Teasing (WT) on Academic Achievement (AA).**
 - H6a:** BD and EDS sequentially mediate the effect of WT on AA.
 - H6b:** EDS mediate the effect of WT on AA.

- **H7a-f: Early Maladaptive Schema Domains (EMSD) and General Self-Efficacy (GSE) Mediate the Effects of Parenting Style (PS) and Childhood Abuse (CA) on Academic Achievement (AA).**

H7a: EMSD and GSE sequentially mediate the effect of PS on AA.

H7b: GSE mediates the effect of PS on AA.

H7c: EMSD mediate the effect of PS on GSE.

H7d: EMSD and GSE sequentially mediate the effect of CA on AA.

H7e: GSE mediates the effect of CA on AA.

H7f: EMSD mediate the effect of CA on GSE.

- **H8a-e: Body Dissatisfaction (BD) and General Self-Efficacy (GSE) Mediate the Effects of Childhood Abuse (CA) and Weight-Related Teasing (WT) on Academic Achievement (AA).**

H8a: BD and GSE sequentially mediate the effect of CA on AA.

H8b: BD mediates the effect of CA on GSE.

H8c: BD and GSE sequentially mediate the effect of WT on AA.

H8d: GSE mediates the effect of WT on AA.

H8e: BD mediates the effect of WT on GSE.

The third general objective of this study was to examine the difference in the hypothesized relationships across two diverse cultural groups of Spanish and Iranian undergraduate students. Referring to previously published studies showed that prior researchers have considered individualism-collectivism culture a moderator in the link between the risk factors for disordered eating and symptoms of eating disorders (Salami et al., 2019). Therefore, to reach the third general objective of this study, culture was considered a moderator. However, due to the absence of prior research investigating the potential influence of culture on the hypothesized mediations in this research, no hypothesis could be formulated in this regard. As a result, the present study aimed to provide an answer to the subsequent question: Does culture moderate common mediations between the Spanish and Iranian models?

5.2 Methods

5.2.1 Participants

Participants in this study were two convenient samples of 367 Spanish and 368 Iranian undergraduate students (17-25 years old) in different faculties of the University of Barcelona in Barcelona, Spain, and the Azad University of Central Tehran Branch in Tehran, Iran.

The sample size was determined by a computing website that employs a priori analysis using the number of observed and latent variables of the model, the anticipated effect size, as well as the desired levels of probability and statistical power, to calculate the minimum number of participants required for structural equation modeling (Soper, 2022). As a result, considering 31 latent and 212 observed variables, an average effect size of .3, a power level of .80, and a probability level of .05, the obtained minimum sample size was 361 students in each country.

5.2.2 Procedure

The process of data collection in this study was carried out from October to April 2022. To collect data from the Iranian sample, since the universities were closed due to COVID-19 until April, an online survey was sent to students who participated in different workshops held by the university. However, universities were open in Spain and the questionnaires were personally distributed among students. The survey in both countries consisted of three sections. The first section provided information to participants regarding the main objectives of the research. The second section obtained informed consent from participants, assuring them of the confidentiality and anonymity of their participation, their right to withdraw from the study at any time, and the requirement of their informed consent. The third section of the survey collected demographic information such as age, gender, ethnicity, education field, and education level. Additionally,

participants were asked to provide their approximate grade point average (GPA) up to the current semester, as well as their weight and height, for the purpose of calculating their body mass index (BMI). This study was approved by the ethical committee of the University of Barcelona (Institutional Review Board: IRB00003099).

5.2.3 Measures

In this study, participants completed eight questionnaires following demographic items. Since there were two samples of Iranian and Spanish undergraduate students, all measures were selected based on their common use in the literature, being validated in Spanish and Persian, and having acceptable psychometric properties.

5.2.3.1 Parental Bonding Instrument (PBI)

Parental Bonding Instrument (PBI) is a self-report instrument with two similar mother's and father's forms. There are 25 items on each form evaluating different parental attitudes and actions during the participants' first 16 years of life. PBI assesses parenting styles using two subscales: care and overprotection/control. Questions on this tool are answered on a four-point Likert scale from 0 to 3 (0 = very unlike, 1 = moderately unlike, 2 = moderately like, 3 = very like). Twelve items examine the care subscale, while thirteen items focus on the overprotection/control (Parker et al., 1979). The care subscale evaluates whether children have experienced parental warmth and affection or coldness and rejection. The overprotection/control items assess whether respondents' parents inhibited or encouraged their autonomy and independence (Barton et al., 2021). The Spanish version of PBI was translated and validated in the second study of this dissertation with the aim of reaching an updated factorial model. The results revealed a four-factor model of care, overprotection, indifference, and autonomy. Moreover, this new Spanish version has 23 items

since two items of 2 and 25 were eliminated due to low factor loadings. The Persian version of PBI was obtained from the author who translated and validated this instrument in Iran. In the Persian version, item 24 has been eliminated due to low factor loading, and there are 24 indicators left (Behzadi & Parker, 2015). According to the second study of this thesis, the new Spanish PBI showed high internal consistency in all subscales of the maternal and paternal forms (ranging from $\alpha = .81$ to $\alpha = .90$). In the study by Behzadi and Parker (2015a), subscales of the Persian PBI have also indicated good internal consistency (ranging from $\alpha = .72$ to $\alpha = .81$). This study revealed acceptable to excellent internal consistency for all the subscales of the maternal and paternal forms in both the Spanish (ranging from $\alpha = .72$ to $\alpha = .90$) and Persian versions (ranging from $\alpha = .81$ to $\alpha = .88$) of this instrument.

5.2.3.2 Early Trauma Inventory Self-Report- Short Form (ETISR-SF)

Early Trauma Inventory (ETI) is a 27-item self-report instrument that evaluates general traumas, as well as physical, emotional, and sexual abuses using a Yes/No response format (Plaza et al., 2011). In this study, indicators related to physical (5 items), emotional (5 items), and sexual abuse (6 items) were employed. The Spanish version of this questionnaire was obtained from the author who had validated it in Spain (Plaza et al., 2011). To use the same questionnaire in Iran, the original English version was obtained from its author (Bremner et al., 2000) and was translated into Persian following Brislin's (1970) guidelines. The Spanish validation research (Plaza et al., 2011) has reported acceptable internal consistency for emotional abuse subscale ($\alpha = .72$), while low and questionable internal consistency for physical and sexual abuse subscales ($\alpha = .42$, and $.68$, respectively). However, In the current study, the internal consistency yielded satisfactory for all three subscales of physical, emotional, and sexual abuse in both Spanish ($\alpha = .70$, $.75$, and $.75$, respectively) and Iranian samples ($\alpha = .75$, $.86$, $.77$, respectively).

5.2.3.3 Perception of Teasing Scale (POTS)

Perception of Teasing Scale (POTS) is a self-report questionnaire which is comprised of 11 items assessing two dimensions of weight-related and competence-related teasing (Jensen & Steele, 2010; Thompson et al., 1995). In this research, six items of weight-related teasing were used. It is noteworthy that each question in this instrument consists of two parts; the first part asks the respondent if they have had a specific experience, and the second asks the level of their unhappiness regarding that experience. Although both parts employ a five-level response scale, in the first part the response format is from 1 = never to 5 = very often, while in the second part it is from 1 = not upset to 5 = very upset (Thompson et al., 1995). The Spanish version of POTS has been included in the published paper on its validation (López-Guimerà et al., 2012) and its Persian version was translated from its original English version with the permission of its author (Thompson et al., 1995) and according to Brislin (1970) guidelines. This measure has 12 items in the Persian and eight items in the Spanish version. The Spanish validation study by Lopez-Guimerà et al. (2012), revealed good internal consistency for the weight-related teasing subscale ($\alpha = .86$). In the present study, the weight-related teasing subscale indicated excellent internal consistency in both Spanish ($\alpha = .94$) and Iranian versions ($\alpha = .97$) of this instrument.

5.2.3.4 Sociocultural Attitudes Towards Appearance Questionnaire- 4 (SATAQ- 4)

Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ) is a 22-item self-report scale that measures norms and pressures regarding appearance using five dimensions of family pressure, peer pressure, media pressure, thin-ideal internalization, and muscular-ideal internalization. The response scale of this instrument is scored from 1 = strongly disagree to 5 = strongly agree (Schaefer et al., 2015). In this research, eight items related to peers and media pressure were employed. The Spanish version of this tool was available through the published

article on its validation (Llorente et al., 2015) and the Persian version was obtained from the authors who validated this measure in Iran (Sahlan et al., 2020). In the Spanish validation study by Llorente et al. (2015), the subscales of peer and media pressure demonstrated very high internal consistency ($\alpha = .94$, $\alpha = .97$, respectively). Moreover, the Persian validation research by Sahlan et al. (2020) has revealed excellent internal consistency for the peer and media pressure subscales ($\alpha = .88$, $\alpha = .91$, respectively). In the current study, media and peer pressure subscales indicated excellent internal consistency in both Spanish ($\alpha = .94$, $\alpha = .85$, respectively) and Iranian versions ($\alpha = .96$, $\alpha = .88$, respectively) of this instrument.

5.2.3.5 Young Schema Questionnaire- Short Form (YSQ-SF)

Young Schema Questionnaire- Short Form (YSQ-SF) is a self-report measure containing 75 questions that assess maladaptive schemas on a 6-point Likert scale (from 1 = completely untrue to 6 = completely true). In the original English version of YSQ-SF, 15 maladaptive schemas are evaluated within five domains of disconnection and rejection, impaired autonomy and performance, impaired limits, other-directedness, and overvigilance and inhibition (Young et al., 2003). However, in the Spanish version of this instrument, which exists in the doctoral thesis on its translation and validation in Spain, four schema domains have been identified: disconnection schema domain, impaired autonomy schema domain, impaired limits schema domain, and exaggerated goals schema domain (Cid Colom, 2016a). The Persian version of YSQ-SF has been included in a published article validating it in Iran (Khosravani et al., 2020). The Spanish validation study by Cid Colom (2016b) showed acceptable to high internal consistency for all schemas (ranging from $\alpha = .70$ to $\alpha = .81$) except for the vulnerability to harm and illness schema, insufficient self-control schema, and unrelenting standards schema ($\alpha = .64$, $.62$, and $.52$, respectively). In the Persian validation study conducted by Khosravani et al. (2020), the internal

consistency was satisfactory for all the subscales (ranging from $\alpha = .70$ to $\alpha = .87$). In this study, instead of considering individual schemas, we focused on schema domains. All schema domains indicated good internal consistency in both the Spanish (ranging from $\alpha = .74$ to $\alpha = .93$) and Persian (ranging from $\alpha = .86$ to $\alpha = .94$) versions of this questionnaire. Notably, since each schema domain is formed by a number of individual schemas, every schema domain was considered a formative measure³.

5.2.3.6 General Self-Efficacy Scale (GSE)

General Self-Efficacy Scale (GSE) is a 10-item self-report instrument that evaluates a general sense of perceived self-efficacy to predict the ability for coping with daily challenges and adaptation after experiencing all kinds of stressful life events. In GSE, responses are scored on a four-degree format from 1 = not at all true to 4 = exactly true (Schwarzer & Jerusalem, 1995). The Spanish version of this questionnaire has been included in the published article validating it in Spain (Sanjuán Suárez et al., 2000), and the Persian version was obtained from the author of the published article validating it in Iran (Farnia et al., 2020a). In a study by Sanjuán-Suárez et al. (2000), the validated Spanish version of this instrument has indicated good internal consistency ($\alpha = .87$). Moreover, the research by Farnia et al. (2020b) revealed excellent internal consistency for the validated Persian version of GSE ($\alpha = .94$). The present study also showed high internal

³ On a formative measure, items are not interchangeable, as each evaluates a distinct aspect of the construct. Thus, removing an item will alter the nature of the construct. In contrast, items in a reflective measure (questionnaire), are highly correlated and interchangeable. In other words, any individual item can typically be omitted without altering the meaning of the construct being evaluated (Hair et al., 2014). In SmartPLS software, which was employed to conduct structural equation modeling in this research, it is possible to shift from reflective to formative mode simply by changing the direction of the arrows; in other words, when a scale or subscale is considered formative, the direction of the arrows is from the observed variables (items/questions) towards the latent variable (the construct that is meant to be assessed), while for a reflective scale, the arrows point to the opposite direction.

consistency in both the Spanish and Persian versions ($\alpha = .88$, and $\alpha = .89$, respectively) of this questionnaire.

5.2.3.7 Eating Disorder Examination Questionnaire (EDE-Q 6.0)

Eating Disorder Examination Questionnaire (EDE-Q) consists of 28 questions assessing the primary cognitive and behavioral features of eating disorders through 4 subscales of restraint, eating concern, shape concern, and weight concern, as well as binge-eating episodes and compensatory behaviors (vomiting, laxative use, and excessive exercise) within the past 28 days (Fairburn, 2008; Fairburn & Beglin, 1994). In this study, subscales of restraint and eating concern were considered as symptoms of anorexia nervosa, shape and weight concern subscales were used to measure body dissatisfaction, and items 13 to 18 were employed to assess binge-eating episodes and compensatory behaviors as symptoms of bulimia nervosa. The Spanish and Persian versions of EDE-Q was received from the researchers who had validated them in Spain (Peláez-Fernández et al., 2013), and Iran (Mahmoodi et al., 2016). The Spanish validation study by Peláez-Fernández et al. (2012) has indicated acceptable to high internal consistency for all the subscales of this instrument (ranging from $\alpha = .74$ to $\alpha = .93$). In the Persian validation study conducted by Mahmoodi et al. (2016), acceptable to good internal consistency was also demonstrated for all the subscales (ranging from $\alpha = .69$ to $\alpha = .81$). In this study, the subscales of restraint, eating concern, body dissatisfaction, and binge-eating episodes all indicated good to excellent internal consistency in both Spanish ($\alpha = .81$, $.78$, $.88$, and $.94$, respectively) and Iranian versions ($\alpha = .80$, $.78$, $.95$, and $.92$, respectively) of this tool. However, the internal consistency of the compensatory behaviors subscale was very low in both Spanish ($\alpha = .03$) and Persian samples ($\alpha = .26$). Given these results, the compensatory behaviors subscale may be considered a formative measure, in which items are not necessarily correlated but each are assessing distinct aspect of the

corresponding variable. Moreover, since binge-eating episodes and compensatory behaviors are two essential features of bulimia nervosa, or, in other words, form this construct, it was deemed appropriate to regard the bulimia nervosa construct as formative in this research.

5.2.3.8 Individualism-Collectivism Scale

Individualism and Collectivism Scale is a 16-item self-report questionnaire that evaluates horizontal and vertical dimensions of individualistic and collectivistic cultural values using a nine-degree response scale from 1 = strongly disagree to 9 = strongly agree (Triandis & Gelfand, 1998a). The Spanish version of this questionnaire was obtained from the authors who have validated this tool in Spain (Gouveia et al., 2003). The study of Gouveia et al. (2003) showed questionable internal consistency in horizontal individualism and vertical collectivism subscales ($\alpha = .67$, and $\alpha = .68$, respectively) and acceptable internal consistency in vertical individualism and horizontal collectivism subscales ($\alpha = .74$ for both subscales). Gouveia et al. (2011) conducted another research in Spain, in which they obtained questionable internal consistency for the horizontal and vertical individualism subscales ($\alpha = .53$, and $\alpha = .68$, respectively) and acceptable internal consistency for the horizontal and vertical collectivism ($\alpha = .71$, and $\alpha = .77$, respectively). In this study, the obtained internal consistency for the Spanish sample was questionable for horizontal individualism, horizontal collectivism, and vertical collectivism ($\alpha = .55$, $.60$, and $.61$, respectively). Only the vertical individualism subscale showed acceptable internal consistency ($\alpha = .73$). The Persian version, on the other hand, had not been validated in Iran. Therefore, it was translated from its original English version (Triandis & Gelfand, 1998a) into Persian following Brislin's (1970) guidelines. For the Persian version, all subscales including horizontal individualism, vertical individualism, horizontal collectivism, and vertical collectivism showed acceptable internal consistency ($\alpha = .85$, $.79$, $.72$ and $.78$, respectively). Regarding the repeated

results indicating questionable internal consistency for different subscales of this instrument, it may be reasonable to consider each subscale as a formative measure.

5.3 Statistical Analysis

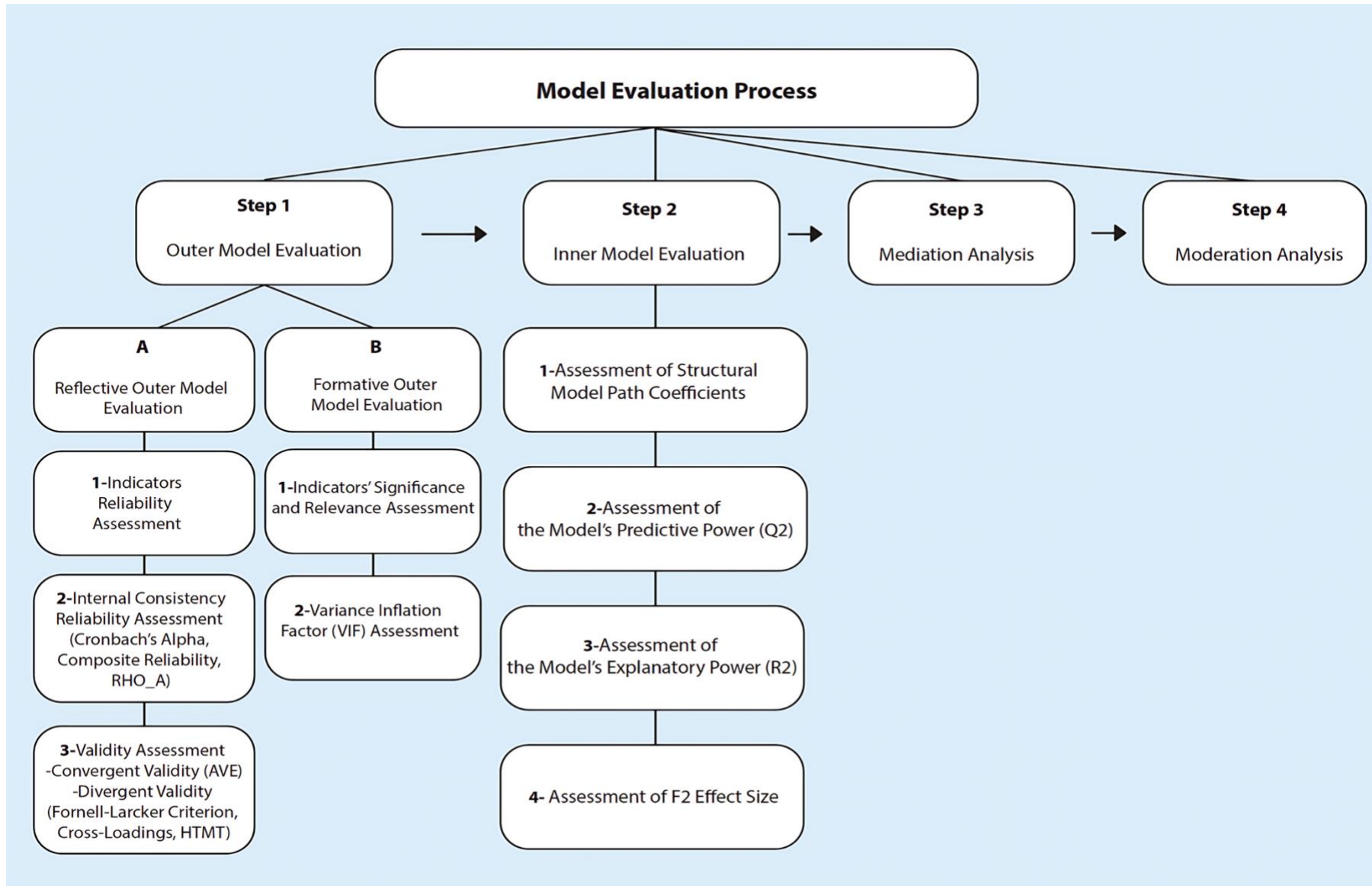
In this study, all analyses were conducted and reported separately for the Spanish and Iranian datasets employing IBM SPSS (version 28.0.1.1) and SmartPLS (version 4.0.9.6) software. Firstly, the screening phase was conducted before the primary process of descriptive statistics in order to solve data issues. Thus, as the first step, the collected data was screened for duplicate cases. Neither the Spanish nor the Iranian samples contained any duplicate cases and we had 367 and 368 unique cases (participants) in the Spanish and Iranian samples, respectively. In the second step of the screening phase, some outliers were found in the Spanish sample caused by typing errors and they were corrected. No outlier was observed in the Iranian dataset. As the third step, we searched for missing values, and some missing data were found in the Spanish dataset. However, since some of the indicators were formative, it was decided neither to delete variables/cases with missing values nor to replace the missing data. Instead, the value "-99", which is a common missing identifier (Gaskin, 2018), was assigned to mark missing data in the Spanish dataset. No missing data was observed in the Iranian dataset. Finally, considering skewness and kurtosis values as the mostly recommended indices of normality testing (Hair et al., 2014), and values outside the range of -2 to +2 as a rule of thumb indicating significant nonnormality (Hair et al., 2022), screening datasets revealed that collected data in both the Spanish and Iranian samples did not follow the pattern of the normal bell, implying the necessity of employing nonparametric statistical tests and methods. Therefore, given the nonnormal distribution of variables and the complexity of the proposed statistical models in this study, it was decided to employ the Partial Least Squares-

Structural Equation Modeling (PLS-SEM) in SmartPLS software to test the proposed model. Conceptually, the PLS-SEM is a nonparametric statistical method, that is insensitive to the shape of data distribution (Hair et al., 2022).

After the data screening phase, descriptive statistics, namely means, standard deviations, and Cronbach's alpha were employed to classify and describe the characteristics of the study samples and research variables. Subsequently, using PLS-SEM, two hypothesized path models for the Spanish and Iranian samples (Figures 5.5 and 5.6) were run and then evaluated according to an algorithm (Figure 5.4) with four different steps to test research hypotheses, or, in other words, to determine the direct and indirect effects of independent variables (maternal and paternal parenting styles, childhood abuses, weight-related teasing, and sociocultural attitudes towards appearance) on the dependent variables (eating disorder symptoms, and academic achievement).

Figure 5.4

Algorithm for Model Evaluation



5.4 Results

5.4.1 Demographic Information and Descriptive Statistics

Demographic data for both Spanish and Iranian samples have been presented in Table 5.1. The Spanish sample consisted of 52 male (14.2%) and 315 female (85.8%) undergraduate students. Participants' age ranged from 17 to 25 ($M = 20.64$, $SD = 1.79$); 108 participants (29.4%) were 17-19, 200 participants (54.5%) were 20-22, and 59 subjects (16.1%) were 23-25 years old. Therefore, more than half of the Spanish sample (54.5%) were between the ages of 20 and 22. A significant proportion of the subjects (76.1%) exhibited a notable GPA. The grade point average of 60 participants (17%) fell within the approved range, while a mere 6.8% of the sample had an excellent GPA. Most of the participants (79.8%) were undergraduates majoring in psychology within the psychology faculty. Other participants included undergraduate students in education, economics and business, law, philology and communication, fine arts, biology, medicine, and health sciences. Participants' BMI ranged from 15.44 to 35.29 ($M = 21.73$, $SD = 3.20$). The majority of the participants (75%) had a healthy (normal) weight with a BMI of 18.5 to 24.9; 40 individuals (11%) showed a BMI below 18.5, indicating that they were underweight; 41 subjects (11.3%) fell into the overweight category with a BMI ranging from 25 to 29.9; and 10 participants (2.7%) were classified as obese with a BMI beyond 30. Furthermore, all modeled variables indicated a Cronbach's alpha above .7, which is considered acceptable (Hair et al., 2022). Hence, the internal consistency of reflective variables was satisfactory in this study.

Table 5.1*Descriptive Statistics of Demographic and Modeled Variables in the Spanish and Iranian Samples*

Variables	Spanish Sample (N = 367)					Iranian Sample (N = 368)					Mann-Whitney U	
	Frequency (%)	Mean ^a (SD)	Skewness	Kurtosis	Cronbach's Alpha	Frequency (%)	Mean (SD)	Skewness	Kurtosis	Cronbach's Alpha	U	Sig
Demographic Variables												
Gender												
Female	315 (85.8)					311 (84.5)						
Male	52 (14.2)					57 (15.5)						
Age												
17-19	108 (29.4)					76 (20.7)						
20-22	200 (54.5)	20.64 (1.79)				191 (51.9)	21.35 (1.81)					
23-25	59 (16.1)					101 (27.4)						
GPA^b												
Approved	60 (17)					29 (7.9)						
Notable	268 (76.1)					164 (44.6)						
Excellent	24 (6.8)					129 (35.1)						
Honored						46 (12.5)						
Education Field												
Psychology	293 (79.8)					198 (53.8)						
Educational Sciences	1 (.3)					47 (12.8)						
Management	2 (.5)					7 (1.9)						
Law	10 (2.7)					28 (7.6)						
Economy	10 (2.7)					5 (1.4)						
Politics	4 (1.1)					6 (1.6)						
Foreign Languages & Translation	4 (1.1)					9 (2.4)						
Art	3 (.8)					13 (3.5)						
Architecture	1 (.3)					5 (1.4)						
Engineering	4 (1.1)					20 (5.4)						
Biology	11 (3)					19 (5.2)						
Medical Sciences	15 (4.1)					5 (1.4)						
Nursing	1 (.3)					6 (1.6)						
Public Relations	5 (1.4)											
Criminology	3 (.8)											

Variables	Spanish Sample (N = 367)					Iranian Sample (N = 368)					Mann-Whitney U	
	Frequency (%)	Mean ^a (SD)	Skewness	Kurtosis	Cronbach's Alpha	Frequency (%)	Mean (SD)	Skewness	Kurtosis	Cronbach's Alpha	U	Sig
BMI												
Underweight	40 (11)					18 (4.9)						
Normal Weight	273 (75)	21.73 (3.20)				208 (56.5)	24.01 (4.23)				44756	<.001**
Overweight	41 (11.3)					107 (29.1)						
Obese	10 (2.7)					35 (9.5)						
Modeled Variables												
Maternal Parenting Style												
Maternal Care		15.34 (3.24)	-1.807	3.783	.869		13.02 (4.04)	-.568	-.097	.681 ^c	42053.5	<.001**
Maternal Overprotection		7.46 (4.97)	.593	-.289	.817		8.37 (5.26)	.231	-.786	.850	60513.5	.01*
Maternal Autonomy		11.01 (2.74)	-.681	.341	.773		10.04 (4.64)	-.181	-.721	.881	59168	.004**
Maternal Indifference		3.46 (3.01)	1.071	1.137	.724		3.71 (3.27)	.616	-.592	.822	65626	.5
Paternal Parenting Style												
Paternal Care		12.97 (4.45)	-.966	.249	.899		11.86 (4.19)	-.386	-.293	.701 ^d	54962	.001**
Paternal Overprotection		5.33 (4.34)	.982	.802	.805		7.58 (5.09)	.462	-.478	.839	49840	<.001**
Paternal Autonomy		11.23 (3.01)	-1.058	1.298	.793		9.49 (4.74)	-.213	-.761	.879	52400	<.001**
Paternal Indifference		5.28 (4.08)	.527	-.754	.838		4.58 (3.37)	.299	-.758	.815	62427	.07
Childhood Abuse												
Physical Abuse		1.61 (1.46)	.528	-.840	.701		1.74 (1.59)	.446	-1.082	.755	64930	.35
Emotional Abuse		1.76 (1.65)	.485	-1.002	.754		2.43 (2)	.045	-1.596	.861	54978	<.001**
Sexual Abuse		.94 (1.36)	1.704	2.507	.748		.83 (1.38)	1.912	3.177	.773	62955	.07
Weight-related Teasing		12.96 (8.44)	1.860	2.549	.944		17.72 (10.47)	1.968	2.908	.966	33308	<.001**
Sociocultural Attitudes Towards Appearance												
Media Pressure		11.30 (5.47)	.203	-1.230	.936		9.15 (5.40)	.718	-.803	.957	51516	<.001**
Peer Pressure		5 (2.38)	3.347	12.536	.853		7.69 (4.15)	1.111	.320	.882	36550.5	<.001**

Variables	Spanish Sample (N = 367)					Iranian Sample (N = 368)					Mann-Whitney U	
	Frequency (%)	Mean ^a (SD)	Skewness	Kurtosis	Cronbach's Alpha	Frequency (%)	Mean (SD)	Skewness	Kurtosis	Cronbach's Alpha	U	Sig
Early Maladaptive Schema Domains^c												
Disconnection & Rejection		63.63 (23.36)	1.110	1.047	.931		52.07 (21.70)	1.049	.671	.936		
Impaired Autonomy & Performance		46.87 (17.50)	1.298	1.710	.908		39.04 (18.75)	1.482	2.201	.945		
Impaired Limits		24.66 (7.51)	.557	.006	.741		27.82 (10.07)	.456	.021	.857		
Exaggerated Goals		33.28 (9.20)	-.022	-.384	.817							
Other-Directedness							26.17 (10.11)	.734	.216	.877		
Overvigilance & Inhibition							28.60 (10.28)	.349	-.405	.866		
Body Dissatisfaction		1.91 (1.52)	.804	-.307	.937		2.11 (1.58)	.577	-.725	.922	62390	.07
General Self-Efficacy		30.05 (5.57)	-.427	-.103	.885		30.90 (5.62)	-.315	-.365	.888	61949.5	.05*
Eating Disorder Symptoms												
EDE-Q Global		1.38 (1.19)					1.49 (1.22)					
Restraint		1.21 (1.31)	1.241	.819	.814		1.22 (1.41)	1.197	.604	.802	64895	.36
Eating Concern		.77 (.98)	1.775	2.615	.776		.83 (1.16)	1.771	2.697	.780	64474.5	.28
Binge-Eating Episodes		.68 (.85)	1.804	4.292	.879		.81 (1.14)	2.658	8.590	.952	65139	.39
Compensatory Behaviors		.36 (.49)	1.363	1.249	.035		.17 (.41)	3.168	11.100	.263	51533	<.001**
Cultural Values												
Horizontal Individualism		6.88 (1.23)	-.758	.819	.547		7.24 (1.60)	-1.103	.913	.854	52940	<.001**
Vertical Individualism		4.21 (1.80)	.322	-.449	.729		5.18 (1.85)	-.063	-.590	.791	47240.5	<.001**
Horizontal Collectivism		7.50 (1.13)	-1.340	3.176	.603		6.54 (1.52)	-.645	.305	.725	40905	<.001**
Vertical Collectivism		5.78 (1.50)	-.274	-.403	.613		6.66 (1.62)	-.639	-.060	.776	45528	<.001**

Note. a = Mean scale score according to the instructions of each instrument; b = The Spanish educational grading system comprises three groups of approved, notable, and excellent GPA, while in Iran there is also a fourth group of honored grade point average; c = If item 14 is deleted, Cronbach's alpha will be .868; d = If item 14 is deleted, Cronbach's alpha will be .875; * P < .05; ** P < .01.

The Iranian sample consisted of 57 male (15.5%) and 311 female (84.5%) undergraduate students, whose age ranged from 17 to 25 ($M = 21.35$, $SD = 1.81$); 76 individuals (20.7%) were 17-19, 191 subjects (51.9%) were 20-22, and 101 respondents (27.4%) were 23-25 years old. Similar to the Spanish sample, more than half of the Iranian sample (51.9%) also consisted of individuals aged 20 to 22. Given the distinct educational grading system in Iran, which is comprised of four groups of approved, notable, outstanding, and honored GPAs, 164 Iranian participants (44.6%) had a notable GPA, and 129 individuals (35.1%) had an excellent one. The grade point average of 29 individuals (7.9%) fell into the approved category, and 46 subjects (12.5%) showed an honored GPA. Hence, like the Spanish sample, most Iranian participants (87.6%) had a GPA between the approved and excellent categories. On the other hand, more than half of the Iranian sample (53.8%) were undergraduate psychology students within the psychology faculty. Other participants were from different faculties, such as education, economics and business, law, philology and communication, fine arts, biology, medicine, and health sciences. Therefore, the composition of the education field was also similar to the Spanish sample. Participants' BMI ranged from 15.24 to 36.76 ($M = 24.01$, $SD = 4.23$). 208 individuals (56.5%) had a healthy (normal) weight with a BMI of 18.5 to 24.9; 18 participants (4.9%) showed a BMI below 18.5, indicating that they were underweight; 107 subjects (29.1%) fell into the overweight category with a BMI ranging from 25 to 29.9; and 35 participants (9.5%) were classified as obese with a BMI beyond 30. Compared to the Spanish sample, the Iranian sample consisted of more overweight and obese participants. In addition, all modeled variables had a Cronbach's alpha higher than .7, except for the maternal and paternal care ($\alpha = .681$, and $.701$, respectively). Notably, according to the proposed four-factor model for the Persian version of the Parental Bonding Instrument (Behzadi & Parker, 2015a), item 14 has been included in the care subscale of this

questionnaire. However, as noted in the footnote of Table 5.1, this item significantly reduces the internal consistency of the maternal and paternal care variables in our study. By eliminating it from both maternal and paternal forms, Cronbach's alpha dramatically increased to .868 and .875 for maternal and paternal care, respectively. Consequently, item 14 of the Persian PBI was removed from the maternal and paternal care subscales.

On the other hand, the Mann-Whitney U test was conducted to compare some variables between the Spanish and Iranian samples. Significant differences were found in the BMI, maternal care, maternal overprotection, maternal autonomy, paternal care, paternal overprotection, paternal autonomy, emotional abuse, weight-related teasing, media and peers' pressure, general self-efficacy, compensatory behaviors, and four types of cultural values (horizontal/vertical individualism and collectivism) mean scores. Notably, due to the existing differences in GPA classification and schema domain composition between the Spanish and Iranian groups, it was not reasonable to employ the Mann-Whitney U test for comparative analysis.

5.4.2 Inferential Statistics

In order to examine the proposed direct and indirect interactions among the independent, mediating, and dependent variables, as well as explore potential moderated mediations, the PLS-SEM method was utilized in this study. This involved developing and running two similar path models for the Spanish and Iranian samples, shown in Figures 5.5 and 5.6. The following paragraphs present a brief description of each figure.

As demonstrated in Figures 5.5 and 5.6, it can be observed that each statistical model consists of independent, mediating, and dependent variables (arranged from left to right). Beginning with independent variables (depicted in pink), on the left (up to bottom) are constructs of maternal and

paternal parenting styles, each of which consists of four dimensions, namely various parenting styles (descending: care, overprotection, indifference, and autonomy). The next independent variable is childhood trauma, which itself includes three dimensions of physical, emotional, and sexual abuse. Subsequently, there is the weight-related teasing variable, and finally, we have sociocultural attitudes towards appearance, which includes two dimensions of media and peer pressures to be thin.

Moving towards the right side of the figure, mediating variables (shown in green) are mainly positioned in the upper center of the figure including five schema domains (right to left: in the Spanish model: disconnection, impaired autonomy, impaired limits, and exaggerated goals domains; in the Iranian model: disconnection and rejection, impaired autonomy and performance, other-directedness, overvigilance and inhibition, and impaired limits domains), each of which is comprised of a number of individual schemas, as well as body dissatisfaction and general self-efficacy. Furthermore, on the lower right side of the figures, there are four dependent variables (illustrated in blue) namely restraint, eating concern, bulimia nervosa (including two essential dimensions of binge-eating episodes and compensatory behaviors), and academic achievement (represented by a single item being GPA). Since the moderator (culture) was introduced to the path models after they were run, both the inner and outer models were evaluated and significant mediations were identified, it has not been shown in Figures 5.5 and 5.6.

It is worth noting that to create a more parsimonious path model (Hair et al., 2022), maternal and paternal parenting styles, childhood abuses, sociocultural attitudes towards appearance, five schema domains, and bulimia nervosa were treated as second-order constructs (higher-order constructs) instead of representing their lower-order constructs, namely eight maternal and paternal parenting styles, three kinds of childhood abuses, peer and media pressures as two types

of sociocultural attitudes towards appearance, fifteen early maladaptive schemas, and binge-eating episodes and compensatory behaviors as symptoms of bulimia nervosa, separately.

As depicted in Figure 5.4, the statistical models were evaluated using a four-step approach. In PLS-SEM, a model consists of two components: an outer model also known as the measurement model, and an inner model, often referred to as the structural model. The outer model investigates the relationships between latent and observed variables⁴, and the inner model evaluates the associations between latent variables⁵. The evaluation process begins with the measurement model, which is composed of two sections: the reflective measurement model and the formative measurement model. The reflective measurement model refers to latent variables which are measured by reflective items, and the formative measurement model is characterized by latent variables being assessed by formative questions. In order to assess the measurement model, the reliability and validity of items (questions) used to measure different variables are assessed by various indices of reliability and validity. These indices include Cronbach's alpha, composite reliability, RHO_A, AVE, Fornell-Larcker criterion, cross-loadings, HTMT, and VIF. This assessment starts with reflective items and then proceeds to formative ones. Subsequently, the inner model is evaluated and the statistical significance of different direct and indirect relationships among latent variables, as well as the predictive (Q^2) and explanatory power (R^2) of the model are examined. Finally, the moderating variable is incorporated into the model, and its influence on shared mediations between the Spanish and Iranian models is explored.

⁴ Observed variables are referred to indicators, items, or questions that measure a latent variable (Hair et al., 2018, p. 608).

⁵ A latent variable is a hypothetical, unobserved concept that can be indirectly measured by multiple observed variables (Hair et al., 2018, p. 608).

Figure 5.5

Statistical Model for the Spanish Sample

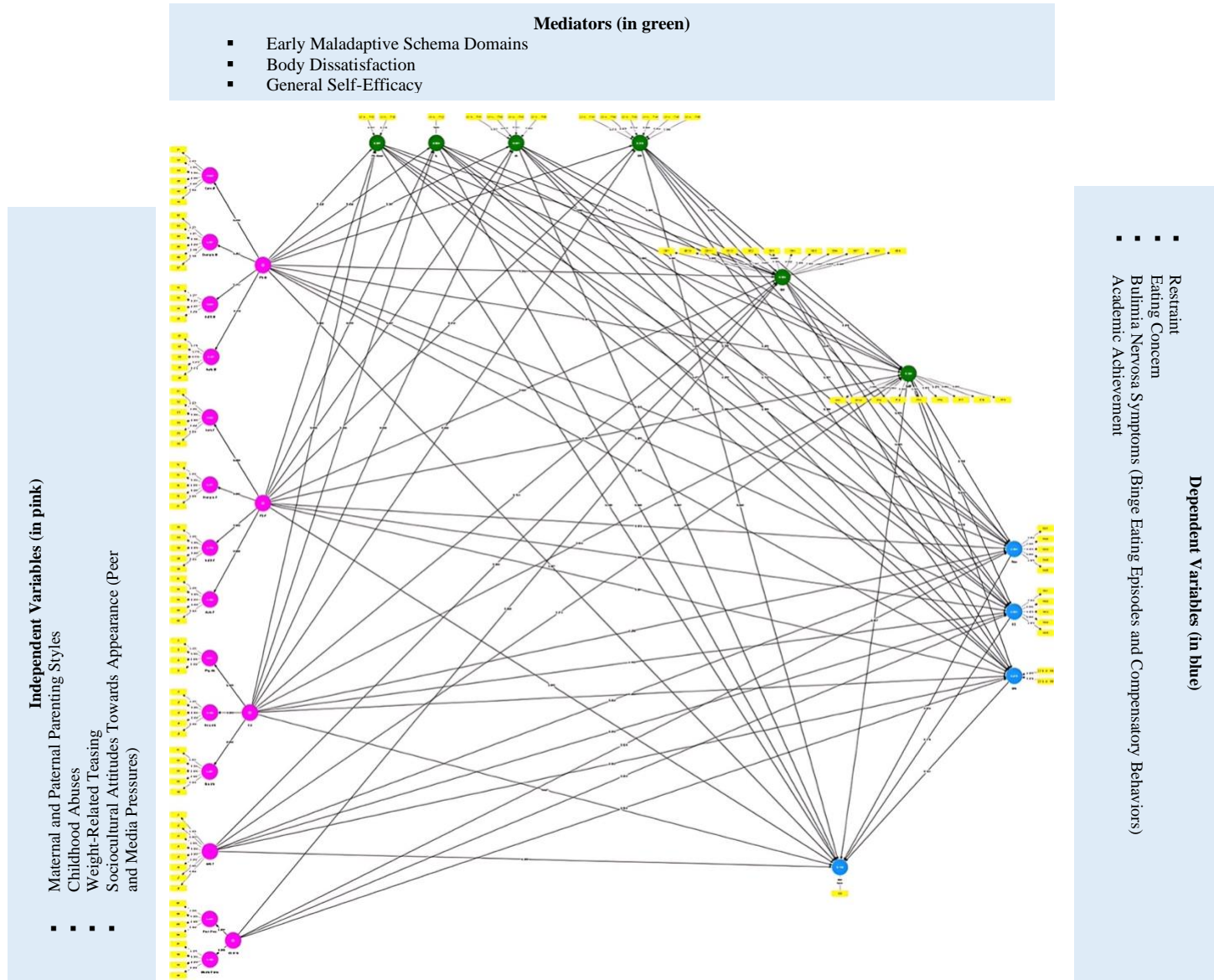
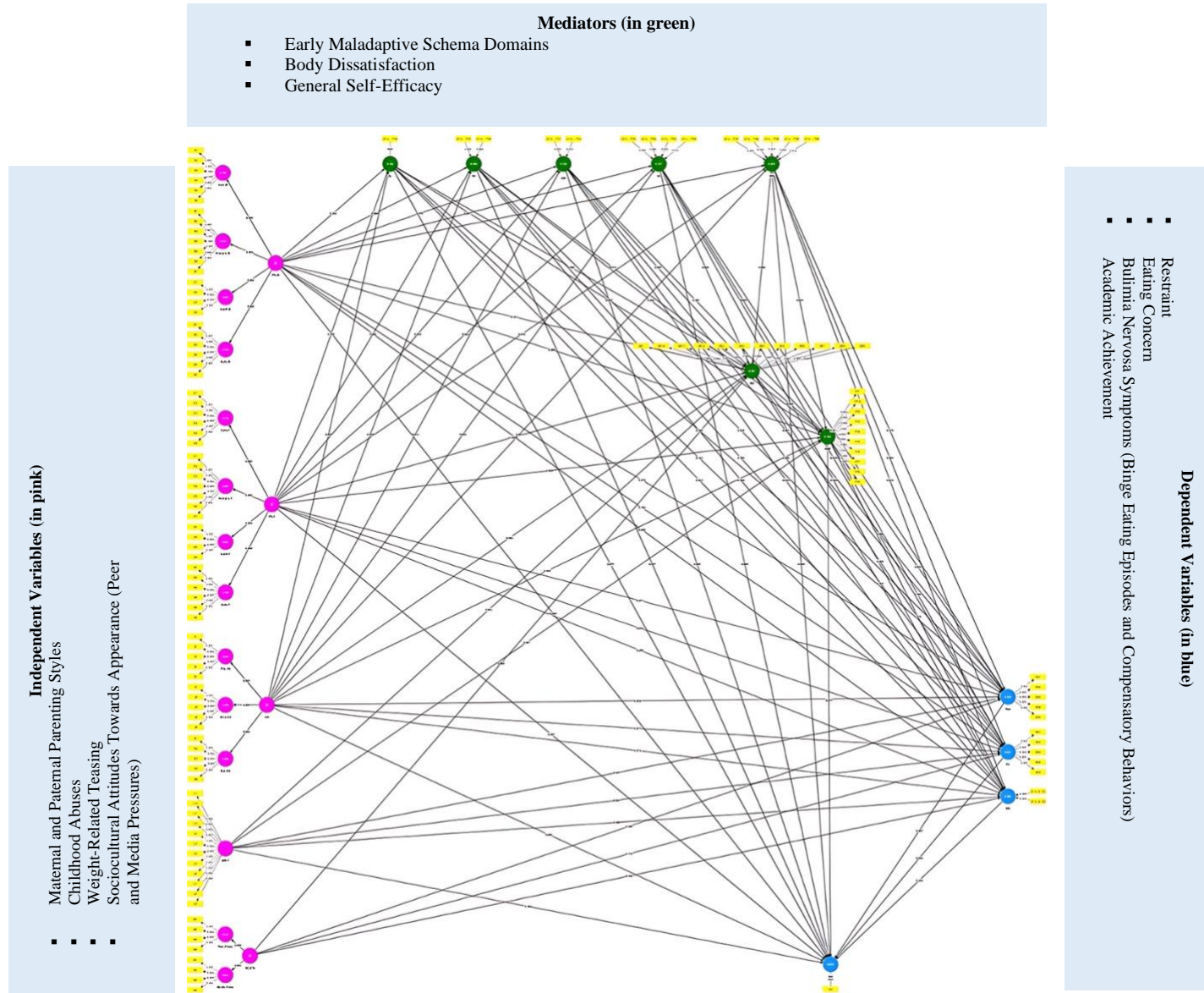


Figure 5.6

Statistical Model for the Iranian Sample



5.4.2.1 Reflective Outer Model Evaluation

In the following sections, we present three distinct stages employed to evaluate the reliability and validity of reflective questions in the outer models (see Figure 5.4, step 1, part A). First, the reliability of reflective items was assessed by checking their factor loadings. Then, their internal consistency was examined by three indices of Cronbach's alpha (this time calculated by the SmartPLS software, and not the IBM SPSS, within the path model), composite reliability, and RHO_A. Lastly, the convergent and divergent validity of the reflective indicators were investigated by indices of AVE, Fornell-Larcker, cross-loadings, and HTMT. Relevant explanations have been provided in each section.

5.4.2.1.1 Indicators Reliability Assessment

The outer loadings of the indicators are the first thing to look at when assessing a reflective measurement model. In this step, based on the factor loading coefficients (the correlation coefficient between latent and observed variables in the outer model) in confirmatory factor analysis, it is decided whether a question remains in the model (Hair et al., 2022).

According to Hair and his colleagues (2022), if the factor loading of an item (outer loading in SmartPLS) is less than .4, it should be removed from the outer model. On the other hand, if the factor loading is more than .7, the item must be retained. However, if the outer loading is equal to or more than .4 but less than .7, the researcher must analyze the impact of item elimination on the reliability and validity indices (i.e., AVE and composite reliability). If the elimination of an item leads the mentioned indices to rise above the threshold, the item with low outer loading should be removed. Otherwise, it may be kept in the model. Following this rule, all reflective indicators had an outer loading of more than .4 in the Spanish path model (see Table C3 in the Appendix C).

Nevertheless, as mentioned before, the validity and reliability indices must be checked before considering any item elimination.

Regarding the Iranian model, all reflective indicators in the Iranian path model had an outer loading above .4 (see Table C4 in the Appendix C). However, the validity and reliability indices had to be checked in order to decide if the elimination of any item is necessary. Table 5.2 indicates construct reliability and validity indices for the Spanish and Iranian models.

Table 5.2*Construct Reliability and Validity in the Spanish and Iranian Models*

Reflective Variables	Spanish Sample				Iranian Sample			
	Cronbach's Alpha	Composite Reliability	Rho_A	Average Variance Extracted (AVE)	Cronbach's Alpha	Composite Reliability	Rho_A	Average Variance Extracted (AVE)
Maternal Care	.877	.907	.877	.619	.877	.910	.906	.635
Maternal Overprotection	.821	.865	.855	.483	.849	.883	.881	.521
Maternal Indifference	.738	.826	.753	.489	.822	.882	.825	.653
Maternal Autonomy	.771	.844	.783	.522	.883	.911	.890	.632
Paternal Care	.902	.924	.902	.670	.880	.910	.898	.631
Paternal Overprotection	.810	.856	.858	.464	.839	.877	.859	.509
Paternal Indifference	.837	.885	.853	.610	.814	.878	.820	.644
Paternal Autonomy	.793	.854	.812	.540	.880	.909	.886	.626
Physical Abuse	.694	.803	.730	.459	.744	.831	.781	.506
Emotional Abuse	.755	.837	.769	.510	.861	.900	.861	.643
Sexual Abuse	.773	.841	.779	.470	.796	.854	.800	.495
Weight-Related Teasing	.953	.961	.955	.753	.970	.973	.972	.750
Peer Pressure	.857	.904	.870	.704	.888	.923	.889	.749
Media Pressure	.937	.955	.937	.840	.957	.969	.959	.887
Body Dissatisfaction	.939	.948	.943	.604	.924	.937	.932	.557
General Self-Efficacy	.885	.907	.888	.498	.889	.910	.899	.507
Restraint	.812	.871	.825	.578	.799	.862	.824	.561
Eating Concern	.778	.849	.808	.534	.784	.853	.819	.542

Note. Red numbers are insufficient values for the related index.

5.4.2.1.2 Internal Consistency Reliability Assessment for Reflective Indicators

In the SmartPLS software, there are three criteria for evaluating the internal consistency reliability of the outer model (measurement model):

- a. Cronbach's alpha
- b. Composite reliability
- c. RHO_A reliability

a. Cronbach's Alpha. Cronbach's alpha is the most common index for evaluating internal consistency-based reliability. The Cronbach's alpha values above .7 are considered acceptable (Coolican, 2017). As shown in Table 5.2, in the Spanish sample, all the Cronbach's alpha coefficients were above .7, except for the physical abuse variable ($\alpha = .694$). However, according to the same table, in the Iranian sample, all variables had a Cronbach's alpha above .7.

b. Composite Reliability. Cronbach's alpha is influenced by the number of items measuring a variable and presumes that all indicators have equal outer loadings on a construct. Consequently, it tends to underestimate internal consistency. Due to these limitations, it is recommended to use another measure of internal consistency reliability in structural equation modeling, known as composite reliability, which considers various outer loadings of the indicators. In other words, indicators with higher factor loadings are considered more important. Thus, composite reliability is a more practical and trustworthy measure than Cronbach's alpha. The value of composite reliability is between 0 and 1, with higher values representing higher levels of reliability (Hair et al., 2014). As indicated in Table 5.2, the composite reliability for all variables was more than .7 in both Spanish and Iranian samples,

indicating the appropriate internal consistency reliability of the research variables within both research models.

c. RHO_A Reliability. As was previously stated, Cronbach's alpha usually underestimates internal reliability. Therefore, compared to Cronbach's alpha when working with PLS-SEM, composite reliability is a more accurate reliability index. On the other hand, since it has been argued that composite reliability overestimates the reliability, RHO_A (ρ_A) was proposed as a new internal reliability coefficient that can calculate the precise value of reliability. RHO_A values above .7 are usually considered acceptable, similar to Cronbach's alpha and composite reliability (Dijkstra & Henseler, 2015). This measure of reliability is typically found to be between Cronbach's alpha and the composite reliability and is therefore considered a good compromise between these two measures (Hair et al., 2022).

According to Table 5.2, in both Spanish and Iranian samples the rho_a values for all the variables met the cut-off point of .7, and the reliability of the research models is also confirmed based on this index.

5.4.2.1.3 Validity Assessment for Reflective Indicators

a. Convergent Validity. Indicators that measure a variable should presumably converge. In other words, they should exhibit a positive correlation and share a substantial amount of variance. This characteristic is known as convergent validity. In SEM, average variance extracted (AVE) is a well-known metric for evaluating the convergent validity. A value of AVE higher than .5 indicates adequate convergent validity for a variable's measuring indicators (Hair et al., 2022).

Although in the Spanish model there was no reflective item with a factor loading less than .4, many items with factor loadings between .4 and .7 were observed. As stated before, in order to decide which of these items should be eliminated from the model, the researcher must look into the values of reliability and validity indices. As indicated in Table 5.2, in the Spanish model, the value of AVE was less than .5 for maternal overprotection, maternal indifference, paternal overprotection, physical abuse, sexual abuse, and general self-Efficacy (AVE = .483, .489, .464, .459, .470, .498, respectively). Therefore, items B1, C6, F6, I2, K5, and FF3 were eliminated from the Spanish model due to their low outer loadings (outer loadings = .538, .563, .531, .426, .615, and .536, respectively), and to increase the AVE. After deleting these items, the Spanish model was rerun again, and checking the validity of the modified Spanish model yielded that the value of AVE is still not above .5 for the paternal overprotection but is the exact value of .5. Thus, to modify the Spanish model for the second time, another item with an outer loading between .4 and .7 had to be eliminated from the paternal overprotection variable. Consequently, item F1 with the outer loading of .597 was deleted from this variable. After mentioned modifications, the Spanish model was rerun, and outer loadings as well as the model's reliability and validity indices were all checked. As a result, the AVE value of the paternal overprotection had been increased to over .5.

In the Iranian model, although there was no reflective item with an outer loading less than .4, Table 5.2 shows that the AVE value was less than .5 for the sexual abuse variable (AVE = .495). Hence, in order to increase the AVE, item K5 which had the lowest outer loading (.664) was eliminated from this variable. Subsequently, the model was run again and, as Table 5.3 exhibits, all the reliability and validity indices were in the acceptable range. Final outer loadings of all reflective indicators in the Spanish and Iranian samples have been respectively displayed

in Tables C3 and C4 of Appendix C. Moreover, reliability and validity indices of the modified (final) Spanish and Iranian models have been shown in Table 5.3.

It is noteworthy that mentioned eliminated indicators (B1, C6, F1, F6, I2, K5, and FF3) were related to the reflective variables, and the modifications related to the formative variables have been addressed in the following sections (formative outer model evaluation).

Table 5.3*Construct Reliability and Validity in the Modified Spanish and Iranian Models*

Reflective Variables	Spanish Sample				Iranian Sample			
	Cronbach's Alpha	Composite Reliability	Rho_A	Average Variance Extracted (AVE)	Cronbach's Alpha	Composite Reliability	Rho_A	Average Variance Extracted (AVE)
Maternal Care	.877	.907	.877	.619	.877	.910	.906	.635
Maternal Overprotection	.818	.866	.851	.523	.849	.883	.881	.521
Maternal Indifference	.728	.830	.733	.550	.822	.882	.825	.653
Maternal Autonomy	.771	.844	.782	.522	.883	.911	.890	.632
Paternal Care	.902	.924	.902	.670	.880	.910	.898	.631
Paternal Overprotection	.789	.851	.833	.536	.839	.877	.859	.509
Paternal Indifference	.837	.885	.853	.610	.814	.878	.820	.644
Paternal Autonomy	.793	.854	.812	.540	.880	.909	.886	.626
Physical Abuse	.717	.825	.727	.543	.744	.831	.782	.506
Emotional Abuse	.755	.837	.768	.510	.861	.900	.861	.643
Sexual Abuse	.758	.838	.760	.508	.769	.843	.774	.519
Weight-Related Teasing	.953	.961	.955	.753	.970	.973	.972	.750
Peer Pressure	.857	.904	.870	.704	.888	.923	.889	.749
Media Pressure	.937	.955	.937	.840	.957	.969	.959	.887
Body Dissatisfaction	.939	.948	.943	.604	.924	.937	.932	.557
General Self-Efficacy	.889	.911	.895	.536	.889	.910	.899	.507
Restraint	.812	.871	.825	.577	.799	.862	.824	.561
Eating Concern	.778	.849	.808	.534	.784	.853	.819	.542

b. Divergent Validity (Discriminant Validity). Divergent validity evaluates a reflective measurement model's ability to distinguish between the questions of a latent variable from the questions of other latent variables in a model. In other words, the degree to which a construct is truly distinct from other constructs is called divergent validity. To measure divergent validity, three main tests of Fornell-Larcker, Cross-Loadings, and Heterotrait-Monotrait Ratio (HTMT) are usually performed (Hair et al., 2022). It should be noted that convergent and divergent validity together can demonstrate the validity of the data collected by indicators that measure the research variables.

b-1 Fornell-Larcker Criterion. The Fornell-Larcker criterion is the degree of the relationship of a variable with itself in comparison to the relationship between that variable and other variables; thus, the acceptable divergent validity of a model indicates that variables in the model interact more with themselves than with other variables. The Fornell-Larcker matrix is a correlation matrix in which, in its main diagonal, the AVE's square root is assigned instead of the number 1. The square root of a variable's AVE must be higher than its correlation with other variables (Hair et al., 2014). Tables C5 and C6 in the Appendix C, display the Fornell-Larcker matrices for the Spanish and Iranian models.

In both Spanish and Iranian models, the square root value of AVE for each variable was higher than the correlation of that variable with other variables, except for one correlation; in both Spanish and Iranian models there was a strong correlation between two variables of body dissatisfaction (G) and eating concern (Ib). This correlation could be reasoned due to the similarities between the questions measuring these two variables. In other words, since in this study two variables of body dissatisfaction and eating concern have been measured by two different subscales of the Eating Disorder Examination Questionnaire (EDE-Q), a

typical resemblance can occur between items assessing the participants' concerns regarding eating as well as body weight and shape. Consequently, this correlation was considered normal and not destructive to the divergent validity.

b-2 Cross-Loadings Criterion. The cross-loadings criterion compares the correlation between an item and its associated latent variable to the correlation between that item and other latent variables. Therefore, the divergent validity of the model will be doubted if the degree of correlation between an item and another variable (other than its corresponding variable) is higher than the degree of correlation between that item and its corresponding variable (Hair et al., 2022). Tables C7 and C8 in Appendix C, show cross-loadings in the Spanish and Iranian models.

In both Spanish and Iranian samples, the correlation coefficient of each item with its corresponding variable was at least .1 more than the correlation coefficient of that item with other variables, indicating the appropriate divergent validity of both outer models. Therefore, it can be claimed that the indicators of each latent variable diverge or differentiate from the indicators of other latent variables.

b-3 Heterotrait-Monotrait Ratio (HTMT) Criterion. The most recent and important test of divergent validity is the Heterotrait-Monotrait Ratio (HTMT), developed by Henseler and his colleagues (2015) to measure the ability to distinguish the indicators and variables of the research model from each other. In other words, this criterion is the mean of the correlations between all the indicators in the model evaluating distinct phenomena. When the HTMT value for each pair of variables is less than .9, the outer model's divergent validity is fully confirmed. Tables C9 and C10 in Appendix C illustrate the HTMT matrices for the Spanish and Iranian models, respectively. Accordingly, all the pairs of variables in

both Spanish and Iranian models had an HTMT index of less than .9, except for two pairs of variables:

- a) maternal care (Aa) and maternal indifference (Ac),
- b) paternal care (Ba) and paternal indifference (Bc).

As stated before, care and indifference are two poles of the same dimension, as are overprotection and autonomy. Consequently, an HTMT index higher than .9 was predictable and not destructive to the divergent validity. Therefore, given the previous two tests of Fornell-Larcker and cross-loadings, the divergent validity of the research models is confirmed.

With the approval of the convergent and divergent validity tests, it can be claimed that our Spanish and Iranian models show appropriate construct validity.

5.4.2.2 Formative Outer Model Evaluation

In current study, all variables were measured reflectively, in the models, except for five schema domains and bulimia nervosa. To evaluate formative items in the outer model, it is necessary to first determine the significance and relevance of the formative questions by examining the statistical significance of their outer weights. Then the variance inflation factor (VIF) is investigated (see Figure 5.4, step 1, part B). The sections that follow provide relevant explanations.

5.4.2.2.1 Significance and Relevance Assessment of the Formative Indicators

A formative indicator has an outer weight in forming its corresponding latent variable. These weights are regression coefficients that cannot be interpreted by themselves but must be significant through indices such as p-value or t-value (Hair et al., 2022).

According to the decision-making process suggested by Hair and colleagues (2022) for keeping or eliminating formative indicators, if the outer weight of an item is significant, it will be kept in the model. Otherwise, the outer loading of this formative indicator should be investigated. In this case, if the outer loading is equal to or more than .5, the formative indicator can be kept in the model, though its outer weight is not significant. If not, the researcher can consider eliminating it.

As shown in Table 5.4, the outer weights of items Fa4, Fa6, Fb2, Fb4, and Fc1 were not significant in the Spanish model (p value $> .05$). Therefore, the outer loadings of these formative items with nonsignificant outer weights had to be checked. Accordingly, all mentioned formative indicators had an outer loading above .5, except for the Fb4 and Fc1 (outer loading = .464, and .181, respectively), which had to be deleted from the model.

Table 5.4

Outer Weights Significance for Formative Indicators in the Spanish Model

Formative Indicators and Related Variables	P Values
Fa1 -> Disconnection Schema Domain	.015*
Fa2 -> Disconnection Schema Domain	.009**
Fa3 -> Disconnection Schema Domain	.012*
Fa4 -> Disconnection Schema Domain	.864
Fa5 -> Disconnection Schema Domain	.002**
Fa6 -> Disconnection Schema Domain	.586
Fb1 -> Impaired Autonomy Schema Domain	.002**
Fb2 -> Impaired Autonomy Schema Domain	.815
Fb3 -> Impaired Autonomy Schema Domain	.001**
Fb5 -> Impaired Autonomy Schema Domain	<.001***
Fc2 -> Impaired Limits Schema Domain	<.001***
Fd1 -> Exaggerated Goals Schema Domain	.001**
Fd2 -> Exaggerated Goals Schema Domain	.016*
Ic1 -> Bulimia Nervosa	<.001***

Formative Indicators and Related Variables	P Values
Ic2 -> Bulimia Nervosa	.006**

Note. Red numbers are insufficient values for the associated index; *p value < .05, ** p value < .01, ***p value < .001.

In the Iranian model, according to Table 5.5, the outer weights of formative items Fa2, Fa4, Fb2, Fb4, Fc2, Fd2, and Fe1 were not significant (p value > .05). Nevertheless, the outer loadings of these items were all above .5, except for item Fe1 (outer loading = .482). Therefore, this formative indicator was eliminated from the Iranian model.

Table 5.5

Outer Weights Significance for Formative Indicators in the Iranian Model

Formative Indicators and Related Variables	P Values
Fa1 -> Disconnection and Rejection Schema Domain	<.001***
Fa2 -> Disconnection and Rejection Schema Domain	.150
Fa3 -> Disconnection and Rejection Schema Domain	.043*
Fa4 -> Disconnection and Rejection Schema Domain	.422
Fa5 -> Disconnection and Rejection Schema Domain	.012*
Fb1 -> Impaired Autonomy and Performance Schema Domain	<.001***
Fb2 -> Impaired Autonomy and Performance Schema Domain	.486
Fb3 -> Impaired Autonomy and Performance Schema Domain	.002**
Fb4 -> Impaired Autonomy and Performance Schema Domain	.514
Fc1 -> Other-Directedness Schema Domain	<.001***
Fc2 -> Other-Directedness Schema Domain	.810
Fd1 -> Overvigilance and Inhibition Schema Domain	<.001***
Fd2 -> Overvigilance and Inhibition Schema Domain	.068
Fe2 -> Impaired Limits Schema Domain	<.001***
Ic1 -> Bulimia Nervosa	<.001***

Note. Red numbers are insufficient values for the associated index; *p value < .05, ** p value < .01, ***p value < .001.

Chapter 5

Overall, items B1, C6, F1, F6, FF3, I2, K5, Fb4, and Fc1 were eliminated from the Spanish outer model, and items K5 and Fe1 were removed from the Iranian outer model.

5.4.2.2 Variance Inflation Factor (VIF) of Formative Indicators

The VIF criterion is a collinearity measure for formative indicators in the research model. A VIF value less than 5 shows a noncritical level of collinearity (Hair et al., 2014). The VIF values of the remaining formative indicators in the final Spanish and Iranian models (after modifications) have been presented in Table 5.6. Fortunately, in both final Spanish and Iranian models, the VIF values were all less than 5 and there was no collinearity between formative items.

Now that all the validity and reliability indices associated with the outer models (measurement models) have been evaluated and acceptable values were yielded, we will proceed to examine the inner models (structural models).

Table 5.6

VIF Criterion for the Formative Indicators in the Spanish and Iranian Models

Formative Indicators and Related Latent Variables	VIF
Spanish Sample	
Fa1 -> Disconnection Schema Domain	1.789
Fa2 -> Disconnection Schema Domain	1.736
Fa3 -> Disconnection Schema Domain	2.058
Fa4 -> Disconnection Schema Domain	2.247
Fa5 -> Disconnection Schema Domain	2.291
Fa6 -> Disconnection Schema Domain	1.582
Fb1 -> Impaired Autonomy Schema Domain	2.172
Fb2 -> Impaired Autonomy Schema Domain	2.336
Fb3 -> Impaired Autonomy Schema Domain	1.490
Fb5 -> Impaired Autonomy Schema Domain	1.778
Fc2 -> Impaired Limits Schema Domain	1.000
Fd1 -> Exaggerated Goals Schema Domain	1.116
Fd2 -> Exaggerated Goals Schema Domain	1.116
Ic1 -> Bulimia Nervosa	1.042
Ic2 -> Bulimia Nervosa	1.042
Iranian Sample	

Formative Indicators and Related Latent Variables	VIF
Fa1 -> Disconnection and Rejection Schema Domain	1.542
Fa2 -> Disconnection and Rejection Schema Domain	1.781
Fa3 -> Disconnection and Rejection Schema Domain	1.787
Fa4 -> Disconnection and Rejection Schema Domain	1.921
Fa5 -> Disconnection and Rejection Schema Domain	2.244
Fb1 -> Impaired Autonomy and Performance Schema Domain	2.057
Fb2 -> Impaired Autonomy and Performance Schema Domain	2.733
Fb3 -> Impaired Autonomy and Performance Schema Domain	1.965
Fb4 -> Impaired Autonomy and Performance Schema Domain	1.894
Fc1 -> Other-Directedness Schema Domain	1.350
Fc2 -> Other-Directedness Schema Domain	1.350
Fd1 -> Overvigilance and Inhibition Schema Domain	1.177
Fd2 -> Overvigilance and Inhibition Schema Domain	1.177
Fe2 -> Impaired Limits Schema Domain	1.000
Ic1 -> Bulimia Nervosa	1.032

5.4.2.3 Inner Model Evaluation

In PLS-SEM, the inner (structural) model examines the causal relationships between latent variables. In other words, the inner model aims to test research hypotheses (Hair et al., 2016). Four distinct assessments are undertaken to evaluate the inner model:

- Assessment of structural model's path coefficients
- Assessment of model's predictive power (Q-Square/ Q^2)
- Assessment of model's explanatory power (R-Square/ R^2)
- Assessment of F-Square (f^2) effect size (Hair et al., 2014).

5.4.2.3.1 Assessment of Structural Model's Path Coefficients

In this study, as exhibited in Figures 5.5 and 5.6, numerous causal relationships were defined based on the existing scientific literature. Accordingly, Tables 5.7 and 5.8 show all direct effects, their path coefficients (β) and statistical significance (p value) yielded by the Algorithm⁶ and Bias-Corrected Bootstrapping⁷ (with 5000 subsamples) procedures in the SmartPLS software. Nevertheless, the main objective of this study was the analysis of mediation effects, which have been addressed in another section of this chapter.

⁶ The algorithm is a procedure by which the path coefficients and other model parameters are estimated by maximizing the explained variance of the dependent constructs in a set of partial regressions (Hair et al., 2022).

⁷ The bootstrap is a nonparametric procedure allowing the evaluation of results' significance in PLS-SEM (Ringle et al., 2022).

Table 5.7*All Path Coefficients and their Significance in the Inner Spanish Model*

Direct Effects			Path coefficients (β)	pvalues
1	A -> Fa	Maternal Parenting Style -> Disconnection Domain	.153	.357
2	A -> Fb	Maternal Parenting Style -> Impaired Autonomy Domain	.107	.397
3	A -> Fc	Maternal Parenting Style -> Impaired Limits Domain	.081	.438
4	A -> Fd	Maternal Parenting Style -> Exaggerated Goals	.178	.338
5	A -> G	Maternal Parenting Style -> Body Dissatisfaction	-.150	.332
6	A -> H	Maternal Parenting Style -> General Self-Efficacy	-.152	.343
7	A -> Ia	Maternal Parenting Style -> Restraint	-.005	.935
8	A -> Ib	Maternal Parenting Style -> Eating Concern	-.036	.493
9	A -> Ic	Maternal Parenting Style -> Bulimia Nervosa	.042	.588
10	A -> J	Maternal Parenting Style -> Academic Achievement	.117	.381
11	B -> Fa	Paternal Parenting Style -> Disconnection Domain	-.212	.010*
12	B -> Fb	Paternal Parenting Style -> Impaired Autonomy Domain	-.206	.007**
13	B -> Fc	Paternal Parenting Style -> Impaired Limits Domain	-.164	.019*
14	B -> Fd	Paternal Parenting Style -> Exaggerated Goals	-.030	.666
15	B -> G	Paternal Parenting Style -> Body Dissatisfaction	-.037	.426
16	B -> H	Paternal Parenting Style -> General Self-Efficacy	-.081	.181
17	B -> Ia	Paternal Parenting Style -> Restraint	.001	.993
18	B -> Ib	Paternal Parenting Style -> Eating Concern	.074	.098
19	B -> Ic	Paternal Parenting Style -> Bulimia Nervosa	.036	.607
20	B -> J	Paternal Parenting Style -> Academic Achievement	.212	.002**
21	C -> Fa	Childhood Abuse -> Disconnection Domain	.239	<.001**
22	C -> Fb	Childhood Abuse -> Impaired Autonomy Domain	.239	<.001**
23	C -> Fc	Childhood Abuse -> Impaired Limits Domain	.064	.265
24	C -> Fd	Childhood Abuse -> Exaggerated Goals	.169	.005**
25	C -> G	Childhood Abuse -> Body Dissatisfaction	-.017	.703
26	C -> H	Childhood Abuse -> General Self-Efficacy	.121	.022*
27	C -> Ia	Childhood Abuse -> Restraint	-.051	.296
28	C -> Ib	Childhood Abuse -> Eating Concern	.024	.552
29	C -> Ic	Childhood Abuse -> Bulimia Nervosa	.048	.450
30	C -> J	Childhood Abuse -> Academic Achievement	.031	.627
31	D -> G	Weight-Related Teasing -> Body Dissatisfaction	.323	<.001**
32	D -> H	Weight-Related Teasing -> General Self-Efficacy	.122	.013*
33	D -> Ia	Weight-Related Teasing -> Restraint	.159	.003**
34	D -> Ib	Weight-Related Teasing -> Eating Concern	.137	.002**

Direct Effects			Path coefficients (β)	pvalues
35	D -> Ic	Weight-Related Teasing -> Bulimia Nervosa	.010	.903
36	D -> J	Weight-Related Teasing -> Academic Achievement	.068	.280
37	E -> G	Sociocultural Attitudes -> Body Dissatisfaction	.356	<.001**
38	E -> Ia	Sociocultural Attitudes -> Restraint	-.005	.929
39	E -> Ib	Sociocultural Attitudes -> Eating Concern	.015	.694
40	E -> Ic	Sociocultural Attitudes -> Bulimia Nervosa	.061	.524
41	Fa -> G	Disconnection Domain -> Body Dissatisfaction	.158	.023*
42	Fa -> H	Disconnection Domain -> General Self-Efficacy	.037	.655
43	Fa -> Ia	Disconnection Domain -> Restraint	.159	.017*
44	Fa -> Ib	Disconnection Domain -> Eating Concern	.198	.001**
45	Fa -> Ic	Disconnection Domain -> Bulimia Nervosa	.061	.584
46	Fa -> J	Disconnection Domain -> Academic Achievement	.108	.249
47	Fb -> G	Impaired Autonomy Domain -> Body Dissatisfaction	.017	.800
48	Fb -> H	Impaired Autonomy Domain -> General Self-Efficacy	-.615	<.001**
49	Fb -> Ia	Impaired Autonomy Domain -> Restraint	-.086	.244
50	Fb -> Ib	Impaired Autonomy Domain -> Eating Concern	-.019	.752
51	Fb -> Ic	Impaired Autonomy Domain -> Bulimia Nervosa	.057	.590
52	Fb -> J	Impaired Autonomy Domain -> Academic Achievement	-.182	.061
53	Fc -> G	Impaired Limits Domain -> Body Dissatisfaction	.109	.015*
54	Fc -> H	Impaired Limits Domain -> General Self-Efficacy	-.047	.441
55	Fc -> Ia	Impaired Limits Domain -> Restraint	-.013	.780
56	Fc -> Ib	Impaired Limits Domain -> Eating Concern	-.029	.489
57	Fc -> Ic	Impaired Limits Domain -> Bulimia Nervosa	.008	.900
58	Fc -> J	Impaired Limits Domain -> Academic Achievement	-.248	<.001**
59	Fd -> G	Exaggerated Goals -> Body Dissatisfaction	.102	.032*
60	Fd -> H	Exaggerated Goals -> General Self-Efficacy	.252	<.001**
61	Fd -> Ia	Exaggerated Goals -> Restraint	-.063	.256
62	Fd -> Ib	Exaggerated Goals -> Eating Concern	-.042	.271
63	Fd -> Ic	Exaggerated Goals -> Bulimia Nervosa	-.014	.837
64	Fd -> J	Exaggerated Goals -> Academic Achievement	.032	.749
65	G -> H	Body Dissatisfaction -> General Self-Efficacy	-.064	.254
66	G -> Ia	Body Dissatisfaction -> Restraint	.602	<.001**
67	G -> Ib	Body Dissatisfaction -> Eating Concern	.668	<.001**
68	G -> Ic	Body Dissatisfaction -> Bulimia Nervosa	.363	<.001**
69	H -> Ia	General Self-Efficacy -> Academic Achievement	.073	.150
70	H -> Ib	General Self-Efficacy -> Restraint	-.047	.215
71	H -> Ic	General Self-Efficacy -> Eating Concern	.028	.636
72	H -> J	General Self-Efficacy -> Academic Achievement	-.047	.467

Direct Effects			Path coefficients	pvalues
			(β)	
73	Ia -> J	Restraint -> Academic Achievement	.053	.423
74	Ib -> J	Eating Concern -> Academic Achievement	-.107	.178
75	Ic -> J	Bulimia Nervosa -> Academic Achievement	.118	.101

Note. * $P < .05$; ** $P < .01$.

Table 5.8*All Path Coefficients and their Significance in the Inner Iranian Model*

	Direct Effects	Path coefficients (β)	pvalues
1	A -> Fa Maternal Parenting Style -> Disconnection & Rejection Domain	-.085	.348
2	A -> Fb Maternal Parenting Style -> Impaired Autonomy & Performance Domain	-.089	.297
3	A -> Fc Maternal Parenting Style -> Other-Directedness Domain	-.078	.376
4	A -> Fd Maternal Parenting Style -> Overvigilance & Inhibition Domain	-.091	.296
5	A -> Fe Maternal Parenting Style -> Impaired Limits Domain	-.066	.358
6	A -> G Maternal Parenting Style -> Body Dissatisfaction	.088	.121
7	A -> H Maternal Parenting Style -> General Self-Efficacy	-.036	.608
8	A -> Ia Maternal Parenting Style -> Restraint	-.053	.415
9	A -> Ib Maternal Parenting Style -> Eating Concern	-.052	.192
10	A -> Ic Maternal Parenting Style -> Bulimia Nervosa	-.038	.640
11	A -> J Maternal Parenting Style -> Academic Achievement	.012	.868
12	B -> Fa Paternal Parenting Style -> Disconnection & Rejection Domain	-.220	.010*
13	B -> Fb Paternal Parenting Style -> Impaired Autonomy & Performance Domain	-.159	.041*
14	B -> Fc Paternal Parenting Style -> Other-Directedness Domain	-.234	.003**
15	B -> Fd Paternal Parenting Style -> Overvigilance & Inhibition Domain	-.157	.056
16	B -> Fe Paternal Parenting Style -> Impaired Limits Domain	-.114	.102
17	B -> G Paternal Parenting Style -> Body Dissatisfaction	-.088	.129
18	B -> H Paternal Parenting Style -> General Self-Efficacy	.167	.024*
19	B -> Ia Paternal Parenting Style -> Restraint	-.047	.477
20	B -> Ib Paternal Parenting Style -> Eating Concern	.053	.233
21	B -> Ic Paternal Parenting Style -> Bulimia Nervosa	.103	.259
22	B -> J Paternal Parenting Style -> Academic Achievement	-.139	.057
23	C -> Fa Childhood Abuse -> Disconnection & Rejection Domain	.230	.001**
24	C -> Fb Childhood Abuse -> Impaired Autonomy & Performance Domain	.192	.004**
25	C -> Fc Childhood Abuse -> Other-Directedness Domain	.145	.013*
26	C -> Fd Childhood Abuse -> Overvigilance & Inhibition Domain	.125	.035*
27	C -> Fe Childhood Abuse -> Impaired Limits Domain	.227	<.001**
28	C -> G Childhood Abuse -> Body Dissatisfaction	-.027	.594
29	C -> H Childhood Abuse -> General Self-Efficacy	.119	.045*
30	C -> Ia Childhood Abuse -> Restraint	.007	.904
31	C -> Ib Childhood Abuse -> Eating Concern	-.010	.817
32	C -> Ic Childhood Abuse -> Bulimia Nervosa	.060	.273
33	C -> J Childhood Abuse -> Academic Achievement	-.264	<.001**

	Direct Effects	Path coefficients (β)	pvalues
34	D -> G Weight-Related Teasing -> Body Dissatisfaction	.163	.003**
35	D -> H Weight-Related Teasing -> General Self-Efficacy	.040	.497
36	D -> Ia Weight-Related Teasing -> Restraint	.146	.027*
37	D -> Ib Weight-Related Teasing -> Eating Concern	.118	.031*
38	D -> Ic Weight-Related Teasing -> Bulimia Nervosa	.217	.006**
39	D -> J Weight-Related Teasing -> Academic Achievement	.091	.164
40	E -> G Sociocultural Attitudes -> Body Dissatisfaction	.437	<.001**
41	E -> Ia Sociocultural Attitudes -> Restraint	-.041	.549
42	E -> Ib Sociocultural Attitudes -> Eating Concern	.020	.715
43	E -> Ic Sociocultural Attitudes -> Bulimia Nervosa	.019	.798
44	Fa -> G Disconnection & Rejection Domain -> Body Dissatisfaction	.004	.966
45	Fa -> H Disconnection & Rejection Domain -> General Self-Efficacy	.050	.629
46	Fa -> Ia Disconnection & Rejection Domain -> Restraint	-.111	.175
47	Fa -> Ib Disconnection & Rejection Domain -> Eating Concern	.034	.592
48	Fa -> Ic Disconnection & Rejection Domain -> Bulimia Nervosa	-.036	.672
49	Fa -> J Disconnection & Rejection Domain -> Academic Achievement	-.016	.854
50	Fb -> G Impaired Autonomy & Performance Domain -> Body Dissatisfaction	.172	.026*
51	Fb -> H Impaired Autonomy & Performance Domain -> General Self-Efficacy	-.301	.001**
52	Fb -> Ia Impaired Autonomy & Performance Domain -> Restraint	-.057	.481
53	Fb -> Ib Impaired Autonomy & Performance Domain -> Eating Concern	-.061	.410
54	Fb -> Ic Impaired Autonomy & Performance Domain -> Bulimia Nervosa	-.112	.150
55	Fb -> J Impaired Autonomy & Performance Domain -> Academic Achievement	-.037	.669
56	Fc -> G Other-Directedness Domain -> Body Dissatisfaction	-.075	.339
57	Fc -> H Other-Directedness Domain -> General Self-Efficacy	-.099	.330
58	Fc -> Ia Other-Directedness Domain -> Restraint	-.002	.985
59	Fc -> Ib Other-Directedness Domain -> Eating Concern	.075	.236
60	Fc -> Ic Other-Directedness Domain -> Bulimia Nervosa	.020	.812
61	Fc -> J Other-Directedness Domain -> Academic Achievement	-.036	.645
62	Fd -> G Overvigilance & Inhibition Domain -> Body Dissatisfaction	.062	.313
63	Fd -> H Overvigilance & Inhibition Domain -> General Self-Efficacy	.045	.544
64	Fd -> Ia Overvigilance & Inhibition Domain -> Restraint	-.013	.838
65	Fd -> Ib Overvigilance & Inhibition Domain -> Eating Concern	-.015	.765
66	Fd -> Ic Overvigilance & Inhibition Domain -> Bulimia Nervosa	.072	.394
67	Fd -> J Overvigilance & Inhibition Domain -> Academic Achievement	.141	.027*
68	Fe -> G Impaired Limits Domain -> Body Dissatisfaction	.032	.560
69	Fe -> H Impaired Limits Domain -> General Self-Efficacy	-.141	.050*
70	Fe -> Ia Impaired Limits Domain -> Restraint	-.090	.160
71	Fe -> Ib Impaired Limits Domain -> Eating Concern	.069	.143

Direct Effects			Path	pvalues
			coefficients (β)	
72	Fe -> Ic	Impaired Limits Domain -> Bulimia Nervosa	.030	.664
73	Fe -> J	Impaired Limits Domain -> Academic Achievement	.059	.415
74	G -> H	Body Dissatisfaction -> General Self-Efficacy	.040	.500
75	G -> Ia	Body Dissatisfaction -> Restraint	.567	<.001**
76	G -> Ib	Body Dissatisfaction -> Eating Concern	.696	<.001**
77	G -> Ic	Body Dissatisfaction -> Bulimia Nervosa	.408	<.001**
78	H -> Ia	General Self-Efficacy -> Restraint	.091	.052
79	H -> Ib	General Self-Efficacy -> Eating Concern	.013	.752
80	H -> Ic	General Self-Efficacy -> Bulimia Nervosa	-.018	.715
81	H -> J	General Self-Efficacy -> Academic Achievement	.110	.077
82	Ia -> J	Restraint -> Academic Achievement	-.003	.967
83	Ib -> J	Eating Concern -> Academic Achievement	-.032	.640
84	Ic -> J	Bulimia Nervosa -> Academic Achievement	-.067	.246

Note. * $P < .05$; ** $P < .01$.

5.4.2.3.2 Assessment of model's Predictive Power (*Q-Square/Q²*)

In PLS-SEM, the predictive power of a model is measured by the "Stone-Geisser's Q^2 value". Predictive power or relevance is the precision with which reflective endogenous⁸ variables in a model can be predicted. For each reflective endogenous latent variable in the structural model, Q^2 values above zero demonstrate the suitable predictive relevance of the path model regarding that particular variable (Hair et al., 2014). Table 5.9 demonstrates Q^2 values for endogenous latent variables in the Spanish and Iranian models, respectively. Accordingly, the Q^2 value for all endogenous latent variables were above zero in both models, indicating their suitable predictive power.

Table 5.9

Q-Square Values for Endogenous Variables in the Spanish and Iranian Models

Endogenous Latent Variables	Spanish Sample	Iranian Sample
	Q²	Q²
Body Dissatisfaction	.395	.341
General Self-Efficacy	.021	.005
Restraint	.236	.064
Eating Concern	.308	.291
Bulimia Nervosa	.075	.144
Academic Achievement	.025	.024

⁸ An endogenous latent variable refers to a construct that is explained by other constructs in the model (Hair et al., 2022).

5.4.2.3.3 Assessment of Model's Explanatory Power (*R-Square/ R²*)

This criterion indicates the extent to which one or more exogenous⁹ variables can explain the behavior of an endogenous variable (Hair et al., 2022). Hair and his colleagues (2014) have suggested three values of .25, .50, and .75 for weak, medium, and strong values of R². Table 5.10 shows R-Square values for the Spanish model.

Table 5.10

R-Square Values for Endogenous Variables in the Spanish and Iranian Models

Endogenous Latent Variables	Spanish Model		Iranian Model	
	R ²	Interpretation	R ²	Interpretation
Body Dissatisfaction	.483	Medium	.391	Medium
General Self-Efficacy	.340	Medium	.180	Weak
Restraint	.494	Medium	.330	Medium
Eating Concern	.663	Strong	.641	Strong
Bulimia nervosa	.219	Weak	.295	Medium
Academic Achievement	.138	Weak	.074	Weak

In the Spanish model, body dissatisfaction was explained at a medium level with an R² coefficient of .483; in other words, 48.3% change in body dissatisfaction was explained by the Spanish model. Moreover, with an R² coefficient of .340, the behavior of the general self-efficacy variable was explained at a medium level; in other words, 34% change in general self-efficacy was explained by the Spanish model. Furthermore, the restraint variable was explained in a medium level with an R² coefficient of .494, which means that 49.4% change in restraint was explained by the Spanish model. On the other hand, eating concern variable was strongly explained with an R² coefficient of .663; in other words, 66.3% change in eating concern was explained by the Spanish

⁹ An exogenous latent variable refers to a construct that explains other constructs in the model (Hair et al., 2022).

model. Bulimia nervosa was explained with a weak R^2 coefficient of .219, which means that almost 22% change in bulimia nervosa was explained by the Spanish model. Lastly, the behavior of academic achievement was weakly explained with an R^2 coefficient of .138; in other words, nearly 14% change in the academic achievement was explained by the Spanish model.

Regarding the Iranian model, the body dissatisfaction variable was explained at a medium level, with an R^2 coefficient of .391; in other words, 39.1% change in body dissatisfaction was explained by the Iranian model. Moreover, general self-efficacy was weakly explained with an R^2 coefficient of .180, which means that 18% change in general self-efficacy was explained by the Iranian model. The restraint variable, on the other hand, was moderately explained with a medium R^2 coefficient of .330; in other words, 33% change in restraint symptom was explained by the Iranian model. Furthermore, eating concern was strongly explained with an R^2 coefficient of .641; in other words, 64.1% change in eating concern was explained by the Iranian model. Bulimia nervosa was moderately explained with an R^2 coefficient of .295; in other words, 29.5% change in bulimia symptoms was explained by the Iranian model. In addition, academic achievement was weakly explained with an R^2 coefficient of .074, which means that only 7.4% change in academic achievement was explained by the Iranian model.

To sum up, as demonstrated in Table 5.10, the Spanish model explained 49%, 66%, 22%, and 14% of the variance for restraint, eating concern, bulimia nervosa, and academic achievement, respectively. The Iranian model, on the other hand, explained 33%, 64%, 29%, and 7% of the variance for mentioned variables, which is, in general, slightly less than the Spanish model.

5.4.2.3.4 Assessment of F-Square (f^2) Effect Size

The f^2 effect size is the change in R^2 value when an exogenous construct is removed from the model. In other words, F-Square is used to determine the extent to which an omitted exogenous construct influences an endogenous construct (Hair et al., 2014).

Based on the objectives of this study, Table 5.11 indicates f^2 values for six endogenous variables. The f^2 effect size is interpreted with three values of Cohen (1988): .02, .15, and .35, for small, medium, and large effect size, respectively. The F-Square effect size facilitates the assessment of an exogenous construct's contribution in predicting a latent variable's R^2 value (Hair et al., 2022).

According to Table 5.11, in the Spanish model, regarding body dissatisfaction, disconnection, impaired limits, and exaggerated goals schema domains had small effect sizes ($f^2 = .019, .016, .016$, respectively). The effect size of maternal parenting style was medium ($f^2 = .027$), and the effect sizes of weight-related teasing and sociocultural attitudes towards appearance were large ($f^2 = .164, .193$, respectively). In other words, the change in body dissatisfaction's R^2 value will be substantial if weight-related teasing and sociocultural attitudes towards appearance (media and peers' pressures to be thin) are eliminated from the model, indicating that these variables greatly impact body dissatisfaction.

In terms of general self-efficacy, childhood abuse and weight-related teasing had small effect sizes ($f^2 = .015$, and $.016$, respectively), maternal parenting style and exaggerated goals schema domain had medium effect sizes ($f^2 = .021, .073$), and impaired autonomy schema domain showed a large effect size ($f^2 = .221$). In other words, if the impaired autonomy schema domain is removed from the path model, the R^2 value of the general self-efficacy will be remarkably changed, implying the high impact of impaired autonomy schema domain on general self-efficacy.

The effect size of disconnection schema domain on restraint variable was small ($f^2 = .019$), the effect size of weight-related teasing on the restraint variable was medium ($f^2 = .035$), and body dissatisfaction had a large effect size ($f^2 = .368$) on restraint. Therefore, eliminating body dissatisfaction from the model leads to a significant reduction in R^2 , implying its important effect on the restraint variable.

Regarding eating concern, weight-related teasing and the disconnection schema domain showed medium effect sizes ($f^2 = .039$ and $.045$, respectively), while body dissatisfaction indicated a large effect size ($f^2 = .680$); in other words, removing weight-related teasing and the disconnection schema domain from the model moderately affects eating concern, while body dissatisfaction elimination has a significant impact on it.

Regarding the bulimia nervosa variable, body dissatisfaction was the only variable with a measurable and medium effect size ($f^2 = .087$). Hence, eliminating body dissatisfaction from the model decreases bulimia nervosa's R^2 in a medium level, showing its moderate effect on the development of bulimia nervosa symptoms.

In terms of academic achievement, impaired autonomy schema domain and bulimia nervosa had small effect sizes ($f^2 = .012$, $.012$, respectively), while paternal parenting style and impaired limits schema domain exhibited medium effect sizes ($f^2 = .030$, $.049$, respectively). In other words, the elimination of paternal parenting style and impaired limits schema domain from the path model will moderately affect academic achievement, while the elimination of impaired autonomy schema domain and bulimia nervosa has a small influence on it.

Table 5.11

F-Square Effect Size Values for the Spanish and Iranian Models

Exogenous Latent Variables	Spanish Sample						Iranian Sample					
	Body Dissatisfaction	General Self-Efficacy	Restraint	Eating Concern	Bulimia Nervosa	Academic Achievement	Body Dissatisfaction	General Self-Efficacy	Restraint	Eating Concern	Bulimia Nervosa	Academic Achievement
Maternal Parenting Style	.027 ^M	.021 ^M	0	.002	.001	.009	.007	.001	.002	.004	.001	0
Paternal Parenting Style	.002	.006	0	.009	.001	.030 ^M	.007	.018 ^S	.002	.004	.008	.011 ^S
Childhood Abuse	.0004	.015 ^S	.004	.001	.002	.001	.001	.011 ^S	0	.0002	.003	.046 ^M
Weight-Related Teasing	.164 ^L	.016 ^S	.035 ^M	.039 ^M	0	.004	.030 ^M	.001	.021 ^M	.026 ^M	.044 ^M	.006
Sociocultural Attitudes Towards Appearance	.193 ^L		0	.0004	.003		.214 ^L		.001	.001	.0003	
Disconnection Domain	.019 ^S	.001	.019 ^S	.045 ^M	.002	.005	0	.001	.006	.001	.001	0
Impaired Autonomy Domain	.0002	.221 ^L	.005	.0003	.001	.012 ^S	.018 ^S	.041 ^M	.002	.004	.006	.001
Impaired Limits Domain	.016 ^S	.002	.0002	.002	0	.049 ^M	.001	.013 ^S	.007	.007	.001	.002
Exaggerated Goals Domain	.016 ^S	.073 ^M	.006	.004	.0002	.001						
Other-Directedness Domain							.003	.005	0	.006	.0002	.001
Over-Vigilance and Inhibition Domain							.004	.001	.0001	.0004	.004	.012 ^S
Body Dissatisfaction		.004	.368 ^L	.680 ^L	.087 ^M			.001	.291 ^L	.820 ^L	.143 ^M	
General Self-Efficacy			.007	.004	.001	.002			.010 ^S	.0004	.0004	.011 ^S
Restraint						.002						0
Eating Concern						.005						.001
Bulimia Nervosa						.012 ^S						.003

Note. S = Small; M = Medium; L = Large.

In the Iranian model, regarding the body dissatisfaction variable, the effect size of the impaired autonomy and performance schema domain was small ($f^2 = .018$), the effect size of weight-related teasing was medium ($f^2 = .030$), and the sociocultural attitudes towards appearance showed a large effect size ($f^2 = .214$). In other words, eliminating the sociocultural attitudes towards appearance construct from the model will remarkably affect body dissatisfaction, while removing the weight-related teasing will have a moderate influence on it.

In terms of general self-efficacy, paternal parenting style, childhood abuse, and the impaired limits schema domain indicated small effect sizes ($f^2 = .018$, $.011$ and $.013$, respectively), and the impaired autonomy and performance schema domain showed a medium effect size ($f^2 = .041$). In other words, removing the impaired autonomy and performance schema domain from the path model will moderately impact general self-efficacy, while the elimination of paternal parenting style, childhood abuse, and the impaired limits schema domain will have a small influence on it.

About the restraint variable, general self-efficacy showed a small effect size ($f^2 = .010$), weight-related teasing exhibited a medium effect size ($f^2 = .021$), and body dissatisfaction indicated a large effect size ($f^2 = .291$). Therefore, eliminating general self-efficacy, weight-related teasing, and body dissatisfaction from the model will respectively have a small, medium, and significant effect on restraint's R^2 value.

Moreover, regarding the eating concern variable, weight-related teasing had a medium effect size ($f^2 = .026$), while the effect size of body dissatisfaction was large ($f^2 = .820$). In other words, removing weight-related teasing from the proposed model will moderately affect eating concern, while the elimination of body dissatisfaction will have a remarkable impact on it.

In terms of bulimia nervosa, both weight-related teasing and body dissatisfaction showed medium effect sizes ($f^2 = .044$, and $.143$, respectively). Hence, eliminating them from our model will moderately affect bulimia nervosa.

Furthermore, regarding academic achievement, paternal parenting style, the overvigilance and inhibition schema domain, and general self-efficacy all showed small effect sizes ($f^2 = .011$, $.012$, and $.011$, respectively), while childhood abuse indicated a medium effect size ($f^2 = .046$). Therefore, removing the childhood abuse from the path model moderately affects academic achievement, while the elimination of paternal parenting style, the overvigilance and inhibition schema domain, and general self-efficacy will have a small influence on it.

5.4.2.4 Mediation Analysis

A mediator is a variable or mechanism that transfers the effect of an independent variable to a dependent variable. Consequently, a mediating effect is primarily characterized by the presence of a third variable that serves as a mediator between the independent and dependent variable. In PLS-SEM, only a significant indirect effect is required to identify a mediation effect. In other words, there is no mediation effect when the indirect effect between the independent and dependent variables is not significant (Hair et al., 2022). Accordingly, Nitzl and colleagues (2016) proposed a two-stage procedure to investigate mediation effects using the PLS-SEM method: Firstly, the significance of the indirect effect is determined by the bias-corrected bootstrapping procedure (with 5000 subsamples), and secondly, the type of mediation (partial or full) is distinguished. When the direct effect between the independent and dependent variable is not significant, the indirect effect is considered a full mediation, meaning that the mediator variable transfers all the effect from the independent to the dependent variable. On the other hand, if the direct effect is significant, the indirect effect is known as partial mediation. In partial mediation, a portion of the effect from the independent to the dependent variable is transferred by the mediator, while the direct effect transfers the rest (Carrión et al., 2017). In complex models, multiple mediators may sequentially mediate the relationship between independent and dependent variables.

According to our hypotheses in this study, all significant indirect effects (mediations) in the Spanish and Iranian models have been shown in Tables 5.12 and 5.13.

Table 5.12

Significant Mediations in the Spanish Model

		Indirect Effects	Path coefficients (β)	pvalues		Direct Effects	pvalues	Mediation Type
Hypothesis 1a	B -> Fa -> Ib	Paternal Parenting Style -> Disconnection Domain -> Eating Concern	-.042	.030*	B -> Ib	Paternal Parenting Style -> Eating Concern	.098	Full
	C -> Fa -> Ia	Childhood Abuse -> Disconnection Domain-> Restraint	.038	.036*	C -> Ia	Childhood Abuse -> Restraint	.296	Full
Hypothesis 2a	C -> Fa -> Ib	Childhood Abuse -> Disconnection Domain-> Eating Concern	.047	.018*	C -> Ib	Childhood Abuse -> Eating Concern	.552	Full
	C -> Fa -> G -> Ia	Childhood Abuse -> Disconnection Domain-> Body Dissatisfaction -> Restraint	.023	.039*	C -> Ia	Childhood Abuse -> Restraint	.296	Full
Hypothesis 2c	C -> Fa -> G -> Ib	Childhood Abuse -> Disconnection Domain-> Body Dissatisfaction -> Eating Concern	.025	.033*	C -> Ib	Childhood Abuse -> Eating Concern	.552	Full
	Fa -> G -> Ia	Disconnection Domain -> Body Dissatisfaction -> Restraint	.095	.027*	Fa -> Ia	Disconnection Domain -> Restraint	.017*	Partial
Hypothesis 2d	Fa -> G -> Ib	Disconnection Domain -> Body Dissatisfaction -> Eating Concern	.105	.022*	Fa -> Ib	Disconnection Domain -> Eating Concern	.001**	Partial
	Fa -> G -> Ic	Disconnection Domain -> Body Dissatisfaction -> Bulimia Nervosa	.057	.042*	Fa -> Ic	Disconnection Domain -> Bulimia Nervosa	.584	Full
	Fc -> G -> Ia	Impaired Limits Domain -> Body Dissatisfaction -> Restraint	.066	.017*	Fc -> Ia	Impaired Limits Domain -> Restraint	.780	Full
	Fc -> G -> Ib	Impaired Limits Domain -> Body Dissatisfaction -> Eating Concern	.073	.017*	Fc -> Ib	Impaired Limits Domain -> Eating Concern	.489	Full
	Fc -> G -> Ic	Impaired Limits Domain -> Body Dissatisfaction -> Bulimia Nervosa	.040	.039*	Fc -> Ic	Impaired Limits Domain -> Bulimia Nervosa	.900	Full
	Fd -> G -> Ia	Exaggerated Goals Domain -> Body Dissatisfaction -> Restraint	.061	.035*	Fd -> Ia	Exaggerated Goals Domain -> Restraint	.256	Full
	Fd -> G -> Ib	Exaggerated Goals Domain -> Body Dissatisfaction -> Eating Concern	.068	.033*	Fd -> Ib	Exaggerated Goals Domain -> Eating Concern	.271	Full

		Indirect Effects	Path coefficients (β)	pvalues		Direct Effects	pvalues	Mediation Type
Hypothesis 2e	C -> Fa -> G	Childhood Abuse -> Disconnection Domain-> Body Dissatisfaction	.038	.046*	C -> G	Childhood Abuse -> Body Dissatisfaction	.703	Full
Hypothesis 3a	D -> G -> Ia	Weight-Related Teasing -> Body Dissatisfaction -> Restraint	.194	<.001**	D -> Ia	Weight-Related Teasing -> Restraint	.003**	Partial
	D -> G -> Ib	Weight-Related Teasing -> Body Dissatisfaction -> Eating Concern	.216	<.001**	D -> Ib	Weight-Related Teasing -> Eating Concern	.002**	Partial
	D -> G -> Ic	Weight-Related Teasing -> Body Dissatisfaction -> Bulimia Nervosa	.117	<.001**	D -> Ic	Weight-Related Teasing -> Bulimia Nervosa	.903	Full
Hypothesis 3b	E -> G -> Ia	Sociocultural Attitudes Towards Appearance - > Body Dissatisfaction -> Restraint	.214	<.001**	E -> Ia	Sociocultural Attitudes Towards Appearance-> Restraint	.929	Full
	E -> G -> Ib	Sociocultural Attitudes Towards Appearance - > Body Dissatisfaction -> Eating Concern	.238	<.001**	E -> Ib	Sociocultural Attitudes Towards Appearance-> Eating Concern	.694	Full
	E -> G -> Ic	Sociocultural Attitudes Towards Appearance - > Body Dissatisfaction -> Bulimia Nervosa	.130	<.001**	E -> Ic	Sociocultural Attitudes Towards Appearance-> Bulimia Nervosa	.524	Full
Hypothesis 7c	B -> Fb -> H	Paternal Parenting Style -> Impaired Autonomy Domain -> General Self-Efficacy	.126	.011*	B -> H	Paternal Parenting Style -> General Self-Efficacy	.181	Full
Hypothesis 7f	C -> Fb -> H	Childhood Abuse -> Impaired Autonomy Domain -> General Self-Efficacy	-.147	<.001**	C -> H	Childhood Abuse -> General Self- Efficacy	.022*	Partial
	C -> Fd -> H	Childhood Abuse -> Exaggerated Goals Domain -> General Self-Efficacy	.043	.016*		Childhood Abuse -> General Self- Efficacy		Partial

Note. *p value < .05; ** p value < .01.

According to Table 5.12, the indirect effects in hypotheses 1a, 2a, 2c, 2d, 2e, 3a, 3b, 7c, and 7f were confirmed in the Spanish model, while other hypotheses were rejected. Now, we will address these confirmed hypothesized mediations:

Hypothesis 1a: Early Maladaptive Schema Domains Mediate the Effect of Parenting Style on Eating Disorder Symptoms. The indirect effect of paternal parenting style on eating concern through disconnection schema domain was significant ($\beta = -.042$, $pvalue = .030$). Thus, the mediating effect of disconnection schema domain in the relationship between paternal parenting style and eating concern was confirmed. Now, the significance of the direct effect should be investigated. The direct effect from the paternal parenting style on eating concern was not significant ($\beta = .074$, $pvalue = .098$). Therefore, disconnection schema domain fully mediated the relationship between paternal parenting style and eating concern.

Hypothesis 2a: Early Maladaptive Schema Domains Mediate the Effect of Childhood Abuse on Eating Disorder Symptoms.

The indirect effect of childhood abuse construct (physical, emotional, or sexual abuse) on eating disorder symptoms (restraint and eating concern) through disconnection schema domain was significant ($\beta = .038$, and $.047$, $pvalue = .036$ and $.018$, respectively). Hence, the mediating effect of disconnection schema domain in the relationship between childhood abuse and eating disorder symptoms was confirmed. Now, the significance of the direct effects should be checked. The direct effect of childhood abuse on none of the restraint or eating concern was significant ($\beta = -.051$, and $.024$, $pvalue = .296$ and $.552$, respectively). As a result, the disconnection schema domain was a full mediator in the relationship between childhood abuse and eating disorder symptoms (restraint and eating concern).

Hypothesis 2c: Early Maladaptive Schema Domains and Body Dissatisfaction Sequentially Mediate the Effect of Childhood Abuse on Eating Disorder Symptoms.

According to Table 5.12, the indirect effect of childhood abuse (physical, emotional, or sexual abuse) on eating disorder symptoms (restraint and eating concern) through disconnection schema domain and body dissatisfaction, was significant ($\beta = .023$, and $.025$, p value = $.039$ and $.033$, respectively). Therefore, the sequential mediating role of disconnection schema domain and body dissatisfaction in the relationship between childhood abuse and eating disorder symptoms was confirmed. Now, the significance of the direct effects should be investigated. The direct effect of childhood abuse on none of the restraint or eating concern was significant ($\beta = -.051$, and $.024$, p value = $.296$, and $.552$, respectively). Therefore, disconnection schema domain and body dissatisfaction were sequential and full mediators in the relationship between childhood abuse and restraint, as well as childhood abuse and eating concern.

Hypothesis 2d: Body Dissatisfaction Mediates the Relationship Between Early Maladaptive Schema Domains and Eating Disorder Symptoms.

The indirect effect of disconnection schema domain on eating disorder symptoms (restraint, eating concern, and bulimia nervosa) through body dissatisfaction was significant ($\beta = .095$, $.105$, and $.057$, p value = $.027$, $.022$, and $.042$, respectively for restraint, eating concern, and bulimia nervosa as dependent variables). Thus, the mediating effect of body dissatisfaction in the relationship between disconnection schema domain and eating disorder symptoms, namely restraint, eating concern, and bulimia nervosa was confirmed. Now, the significance of the direct effects should be investigated. The direct effects of disconnection schema domain on restraint and eating concern were significant ($\beta = .159$, and $.198$, p value = $.017$, and $.001$, respectively), while

the direct effect of disconnection schema domain on bulimia nervosa was not ($\beta = .061$, $pvalue = .584$). Therefore, body dissatisfaction partially mediated the relationship between disconnection schema domain, restraint and eating concern, and fully mediated the relationship between disconnection schema domain and bulimia nervosa.

The indirect effect of impaired limits schema domain on all eating disorder symptoms (restraint, eating concern, and bulimia nervosa) through body dissatisfaction was significant ($\beta = .066$, $.073$, and $.040$, $pvalue = .017$, $.017$, and $.039$, respectively). Thus, the mediating effect of body dissatisfaction in the relationship between impaired limits schema domain and all eating disorder symptoms was confirmed. Now, the significance of the direct effects should be investigated. None of the direct effects from the impaired limits schema domain on eating disorder symptoms were significant ($\beta = -.013$, $-.029$, and $.008$, $pvalue = .780$, $.489$, and $.900$, respectively). Therefore, body dissatisfaction fully mediated the relationship between impaired limits schema domain and all eating disorder symptoms (restraint, eating concern, and bulimia nervosa).

The indirect effect of exaggerated goals schema domain on eating disorder symptoms (restraint and eating concern) through body dissatisfaction was significant ($\beta = .061$, and $.068$, $pvalue = .035$, and $.033$). Hence, the mediating role of body dissatisfaction in the relationship between exaggerated goals schema domain and eating disorder symptoms was confirmed. Now, the significance of the direct effects should be examined. None of the direct effects from exaggerated goals schema domain on restraint or eating concern were significant ($\beta = -.063$, $-.042$, $pvalue = .256$, and $.271$, respectively). Therefore, body dissatisfaction fully mediated the relationship between exaggerated goals schema domain, and restraint, and eating concern.

Hypothesis 2e: Early Maladaptive Schema Domains Mediate the Effect of Childhood Abuse on Body Dissatisfaction.

The indirect effect of childhood abuse construct (physical, emotional, or sexual abuse) on body dissatisfaction through disconnection schema domain was significant ($\beta = .038$, $pvalue = .046$). Therefore, the mediating effect of disconnection schema domain in the relationship between childhood abuse and body dissatisfaction was confirmed. Now, the significance of the direct effect should be investigated. The direct effect of childhood abuse on body dissatisfaction was not significant ($\beta = -.017$, $pvalue = .703$). Thus, disconnection schema domain fully mediated the relationship between childhood abuse and body dissatisfaction.

Hypothesis 3a: Body Dissatisfaction Mediates the Effect of Weight-Related Teasing on Eating Disorder Symptoms.

The indirect effect of weight-related teasing on eating disorder symptoms (restraint, eating concern, and bulimia nervosa) through body dissatisfaction was significant ($\beta = .194$, $.216$, and $.117$, $pvalue < .001$ for all three indirect effects). Therefore, the mediating effect of body dissatisfaction in the relationship between weight-related teasing and eating disorder symptoms was confirmed and the significance of the direct effects should be assessed as the next step. The direct effect of weight-related teasing on restraint and eating concern was significant ($pvalue = .003$ and $.002$, respectively). However, the direct effect of weight-related teasing on bulimia nervosa was not ($\beta = .010$, $pvalue = .903$). Consequently, body dissatisfaction was a partial mediator for the relationship between weight-related teasing and restraint, as well as weight-related teasing and eating concern, and a full mediator for the relationship between weight-related teasing and bulimia nervosa.

Hypothesis 3b: Body Dissatisfaction Mediates the Effect of Sociocultural Attitudes Towards Appearance on Eating Disorder Symptoms.

The indirect effect of sociocultural attitudes towards appearance construct (peer pressure or media pressure) on eating disorder symptoms (restraint, eating concern, and bulimia nervosa) through body dissatisfaction was significant ($\beta = .214, .238, \text{ and } .130, p\text{value} < .001$ for all three indirect effects). Thus, the mediating effect of body dissatisfaction in the relationship between sociocultural attitudes towards appearance and eating disorder symptoms was confirmed. Now, the significance of the direct effects should be investigated. None of the direct effects of sociocultural attitudes towards appearance on eating disorder symptoms were significant ($\beta = -.005, .015, \text{ and } .061, p\text{value} = .929, .694, \text{ and } .524$). Therefore, body dissatisfaction fully mediated the relationship between sociocultural attitudes towards appearance (peer pressure and media pressure) and all eating disorder symptoms.

Hypothesis 7c: Early Maladaptive Schema Domains Mediate the Effect of Parenting Style on General Self-Efficacy.

The indirect effect of paternal parenting style on general self-efficacy through impaired autonomy schema domain was significant ($\beta = .126, p\text{value} = .011$). Therefore, the mediating role of early maladaptive schemas (impaired autonomy schema domain) in the relationship between paternal parenting style and general self-efficacy was confirmed. Now, the significance of the direct effect should be checked. The direct effect of paternal parenting on general self-efficacy was not significant ($\beta = -.081, p\text{value} = .181$). Thus, the impaired autonomy schema domain fully mediated the relationship between paternal parenting style and general self-efficacy.

Hypothesis 7f: Early Maladaptive Schema Domains Mediate the Effect of Childhood Abuse on General Self-Efficacy.

The indirect effect of childhood trauma construct (physical, emotional, or sexual abuse) on general self-efficacy was significant for both conditions, in which the impaired autonomy schema domain ($\beta = -.147$, and $.043$, $pvalue < .001$, and $pvalue = .016$, respectively) and exaggerated goals schema domain were the mediators. Therefore, the mediating roles of impaired autonomy and exaggerated goals schema domains in the relationship between childhood abuse and general self-efficacy was confirmed. Now, the significance of the direct effect should be investigated. The direct effect of childhood abuse on general self-efficacy was significant ($\beta = .121$, $pvalue = .022$). Thus, impaired autonomy and exaggerated goals schema domains separately and partially mediated the relationship between childhood abuse and general self-efficacy.

In the Iranian model, fewer significant indirect effects were observed, and no confirmed sequential mediation was found. The mediation effects in hypotheses 2d, 3a, 3b, and 7f were confirmed, whereas other hypothesized mediations were rejected. Table 5.13 displays all confirmed mediations. Now, these confirmed hypothesized mediations will be addressed:

Table 5.13

Significant Mediations in the Iranian Model

		Indirect Effects	Path coefficients (β)	pvalues		Direct Effects	pvalues	Mediation Type
Hypothesis 2d	Fb -> G -> Ia	Impaired Autonomy & Performance Domain-> Body Dissatisfaction-> Restraint	.098	.031*	Fb -> Ia	Impaired Autonomy & Performance Domain -> Restraint	.481	Full
	Fb -> G -> Ib	Impaired Autonomy & Performance Domain -> Body Dissatisfaction-> Eating Concern	.120	.024*	Fb -> Ib	Impaired Autonomy & Performance Domain -> Eating Concern	.410	Full
	Fb -> G -> Ic	Impaired Autonomy & Performance Domain -> Body Dissatisfaction-> Bulimia Nervosa	.070	.040*	Fb -> Ic	Impaired Autonomy & Performance Domain -> Bulimia Nervosa	.150	Full
Hypothesis 3a	D -> G -> Ia	Weight-Related Teasing-> Body Dissatisfaction-> Restraint	.093	.005**	D -> Ia	Weight-Related Teasing -> Restraint	.027*	Partial
	D -> G -> Ib	Weight-Related Teasing-> Body Dissatisfaction-> Eating Concern	.114	.002**	D -> Ib	Weight-Related Teasing -> Eating Concern	.031*	Partial
	D -> G -> Ic	Weight-Related Teasing-> Body Dissatisfaction-> Bulimia Nervosa	.067	.007**	D -> Ic	Weight-Related Teasing -> Bulimia Nervosa	.006**	Partial
Hypothesis 3b	E -> G -> Ia	Sociocultural Attitudes Towards Appearance-> Body Dissatisfaction-> Restraint	.248	<.001**	E -> Ia	Sociocultural Attitudes Towards Appearance-> Restraint	.549	Full
	E -> G -> Ib	Sociocultural Attitudes Towards Appearance -> Body Dissatisfaction-> Eating Concern	.304	<.001**	E -> Ib	Sociocultural Attitudes Towards Appearance -> Eating Concern	.715	Full
	E -> G -> Ic	Sociocultural Attitudes Towards Appearance -> Body Dissatisfaction-> Bulimia Nervosa	.178	<.001**	E -> Ic	Sociocultural Attitudes Towards Appearance -> Bulimia Nervosa	.798	Full
Hypothesis 7f	C -> Fb -> H	Childhood Abuse-> Impaired Autonomy & Performance Domain-> General Self-Efficacy	-.058	.030*	C -> H	Childhood Abuse -> General Self-Efficacy	.045*	Partial

Note. *p value < .05; ** p value < .01.

Hypothesis 2d: Body Dissatisfaction Mediates the Effect of Early Maladaptive Schema Domains on Eating Disorder Symptoms.

The indirect effect of impaired autonomy schema domain on all eating disorder symptoms (restraint, eating concern, and bulimia nervosa) through body dissatisfaction was significant ($\beta = .098, .120, \text{ and } .070, p\text{value} = .031, .024, \text{ and } .040, \text{ respectively}$). Consequently, the mediating role of body dissatisfaction in the relationship between impaired autonomy schema domain and eating disorder symptoms was confirmed. Now, the significance of the direct effects should be checked. None of the direct effects of impaired autonomy schema domain on restraint, eating concern, or bulimia nervosa was significant ($\beta = -.057, -.061, \text{ and } -.112, p\text{value} = .481, .410, \text{ and } .150, \text{ respectively}$). Therefore, body dissatisfaction fully mediated the relationship between impaired autonomy schema domain and all eating disorder symptoms.

Hypothesis 3a: Body Dissatisfaction Mediates the Effect of Weight-Related Teasing on Eating Disorder Symptoms.

The indirect effect of weight-related teasing on all eating disorder symptoms (restraint, eating concern, and bulimia nervosa) through body dissatisfaction, was significant ($\beta = .093, .114, \text{ and } .067, p\text{value} = .005, .002, \text{ and } .007, \text{ respectively}$). Therefore, the mediating role of body dissatisfaction in the relationship between weight-related teasing and eating disorder symptoms was confirmed and the significance of the direct effects should be assessed as the next step. All direct effects of weight-related teasing on restraint, eating concern, and bulimia nervosa were significant ($\beta = .146, .118, \text{ and } .217, p\text{value} = .027, .031, \text{ and } .006, \text{ respectively}$). Consequently, body dissatisfaction was a partial mediator in all three mediations.

Hypothesis 3b: Body Dissatisfaction Mediates the Effect of Sociocultural Attitudes Towards Appearance on Eating Disorder Symptoms.

The indirect effect of sociocultural attitudes towards appearance construct (peer pressure or media pressure) on all eating disorder symptoms (restraint, eating concern, and bulimia nervosa symptoms) through body dissatisfaction, was significant ($\beta = .248, .304, \text{ and } .178, p\text{value} < .001$ for all three indirect effects). Thus, the mediating effect of body dissatisfaction in the relationship between sociocultural attitudes towards appearance and eating disorder symptoms was confirmed. Now, the significance of the direct effects should be investigated. None of the direct effects of sociocultural attitudes towards appearance on eating disorder symptoms were significant ($\beta = -.041, .020, \text{ and } .019, p\text{value} = .549, .715, \text{ and } .798$). Therefore, body dissatisfaction fully mediated the relationship between sociocultural attitudes towards appearance (peer pressure and media pressure) and all eating disorder symptoms.

Hypothesis 7f: Early Maladaptive Schema Domains Mediate the Effect of Childhood Abuse on General Self-Efficacy.

The indirect effect of childhood abuse (physical, emotional, or sexual abuse) on general self-efficacy through impaired autonomy and performance domain, was significant ($\beta = -.058, p\text{value} = .030$). Thus, the mediating role of impaired autonomy and performance schema domain in the relationship between childhood abuse and general self-efficacy was confirmed. Now, the significance of the direct effect should be checked. The direct effect of childhood abuse on general self-efficacy was also significant ($\beta = .119, p\text{value} = .045$). Therefore, impaired autonomy and performance schema domain partially mediated the relationship between childhood abuse and general self-efficacy.

Overall, the mediating effects in hypotheses 3a, 3b, and 7f were mutually confirmed in both Spanish and Iranian models.

5.4.2.5 Moderation Analysis

Once commonly supported mediations in both Spanish and Iranian samples were identified, the next step was to address the following research question: Does culture moderate common mediations between the Spanish and Iranian models? Hence, for the purpose of answering this question, first a moderated mediation analysis was performed. Then, given the results of the moderated mediation, a simple moderation analysis was conducted, both of which have been described in the following sections:

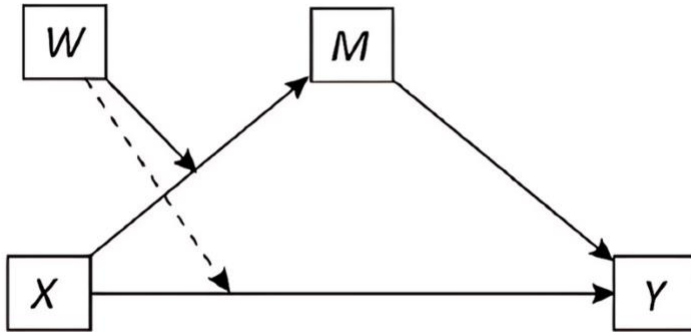
5.4.2.5.1 Moderated Mediation Analysis

Moderated mediation is characterized by the interaction between a moderating and a mediating variable, so that the value of the indirect effect depends on the moderator value. This interaction is also known as the “Conditional Indirect Effect”, since the value of the indirect effect is conditioned on the moderating variable (Hair et al., 2022; Hayes, 2015).

In this regard, Hayes (2015) suggested that the impact of the moderator on the indirect effect must be evaluated as a whole, rather than focusing on a single element of the mediation. To this end, he proposed the “Index of Moderated Mediation”, which is calculated by three different formulas depending on the exact relationship(s) being moderated within a mediation. In other words, when hypothesizing a moderated mediation, three types of conditional models can be considered (Hair et al., 2022). These three conditional models have been depicted in Figures 5.7 to 5.9.

Figure 5.7

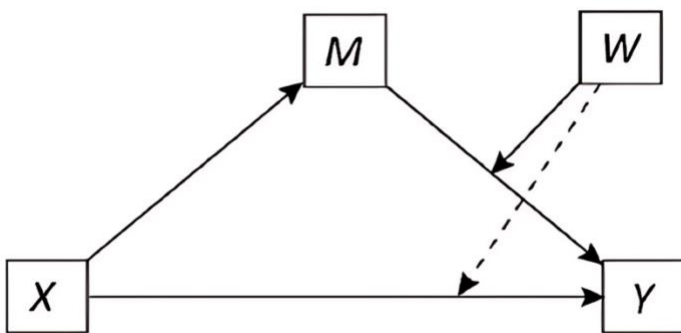
First-Stage Conditional Model



Note. X = Independent variable; M = mediating variable; Y = dependent variable; W = Moderating variable.

Figure 5.8

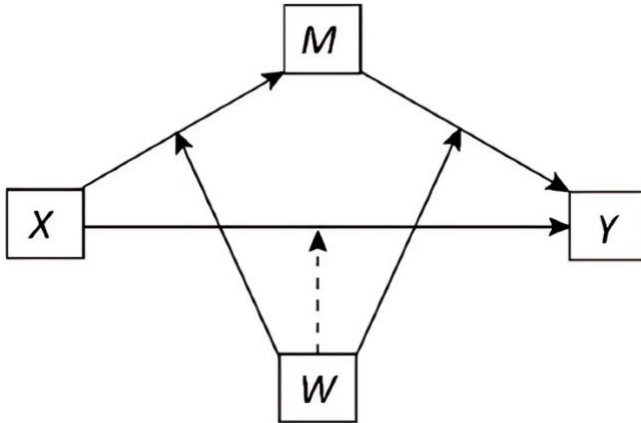
Second-Stage Conditional Model



Note. X = Independent variable; M = mediating variable; Y = dependent variable; W = Moderating variable.

Figure 5.9

First- and Second-Stage Conditional Model



Note. X = Independent variable; M = mediating variable; Y = dependent variable; W = Moderating variable.

The first model is a mediation in which the relationship between the independent and mediating variable is moderated and the effect of the mediator on the dependent variable is statistically fixed to be unaffected by the mediator or any other variables. This model is called the “First-Stage Conditional Model” (see Figure 5.7). The second type of conditional model is when the relationship between the mediator and the dependent variable is moderated and the impact of the independent variable on the mediator is statistically fixed. This model is referred to as the “Second-Stage Conditional Model” (see Figure 5.8).

Lastly, the third form of conditional model, which is the sum of two previous models and is known as the “First- and Second-Stage Conditional Model” (see Figure 5.9), involves the moderation of both the relationships between the independent and mediating variables as well as the mediator and dependent variables by a single moderator (Hayes & Rockwood, 2020). Notably, an impact from the moderator on the direct relationship between the independent and dependent variable can also be incorporated into all three models without disrupting the statistical procedure

of moderated mediation analysis (Hayes, 2018). Dotted lines in Figures 5.7 to 5.9 show the moderating variable moderating the direct effect between the independent and dependent variable.

Furthermore, it is worth noting that the moderated mediation analysis is conducted using the PROCESS method rather than the PLS-SEM approach. Thus, for the purpose of this analysis and in order to obtain the required report type, the statistical model is converted into a PROCESS model within the same SmartPLS software.

On the other hand, in terms of the first-stage conditional model, the path coefficient and significance of the index of moderated mediation can be obtained from the result of the bootstrapping procedure in the SmartPLS software. If this index is significant ($pvalue < .05$ or $pvalue < .01$), it can be deduced that the indirect effect between the independent and dependent variable is dependent on the moderating variable. However, in the other two types of the conditional model, the path coefficient of the index of moderated mediation and its significance cannot be directly retrieved from the SmartPLS report and should be manually calculated (Hair et al., 2022).

Given the absence of prior research on the specific subject of this study, the decision regarding whether to employ a first-stage or second-stage conditional model could not be made with certainty. Therefore, the present study employed an exploratory approach in conducting moderated mediation analysis; in other words, a first- and second-stage conditional model (Figure 5.9) was utilized, and the moderating effect was implemented on both paths of the shared mediations between the Spanish and Iranian models.

As previously indicated in Table 5.1, mean scores of four different subscales of the individualism-collectivism scale showed that horizontal collectivism continues to be the dominant cultural value in Spain, while Iranians' cultural values have shifted towards horizontal

individualism. Therefore, horizontal collectivism and horizontal individualism were considered moderating variables in the Spanish and Iranian models, respectively. Figures 5.10 and 5.11 demonstrate the Spanish and Iranian statistical PROCESS models with the moderating variable (in red).

Figure 5.10

Spanish Statistical Model with the Moderator (in Red)

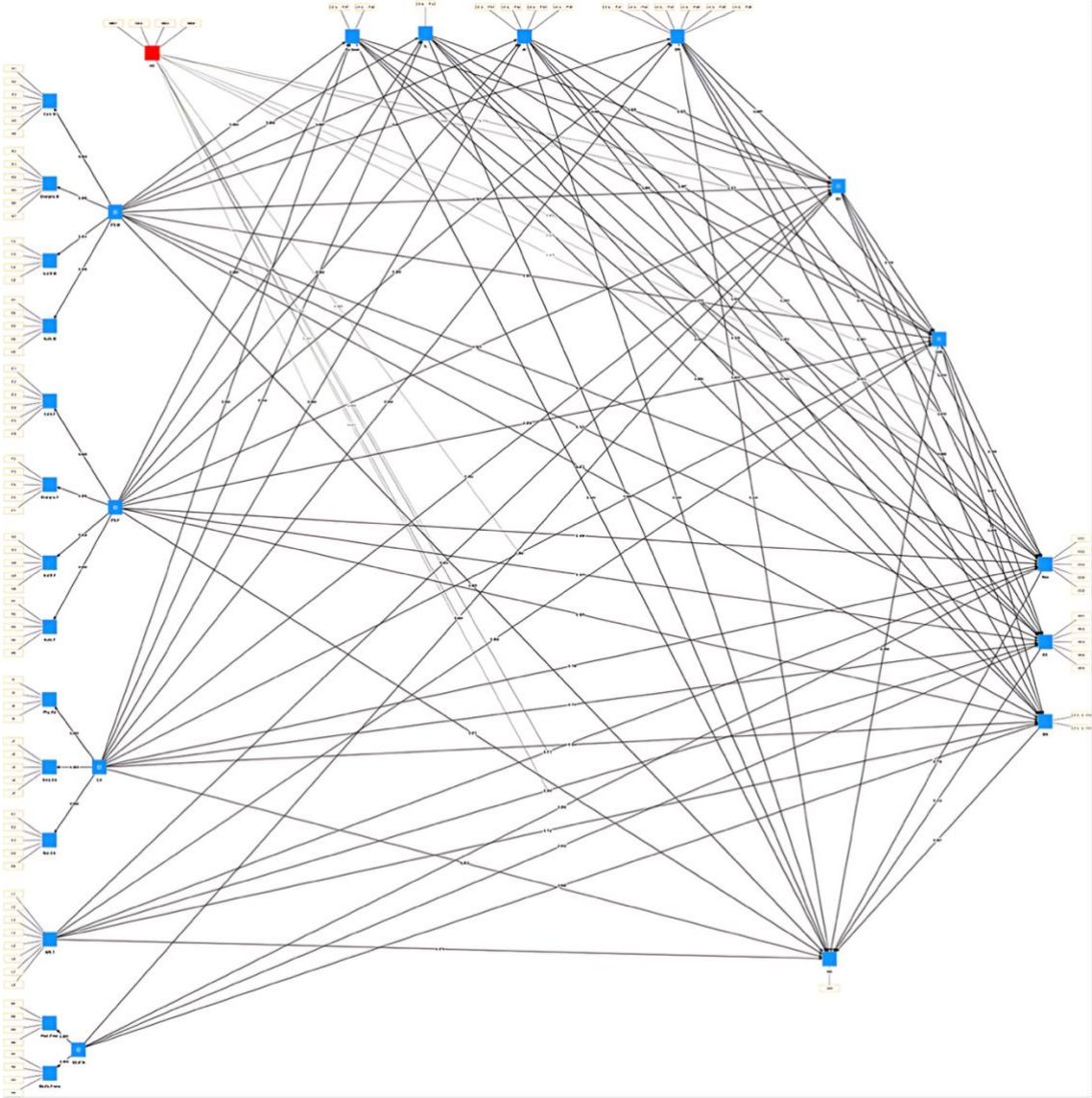
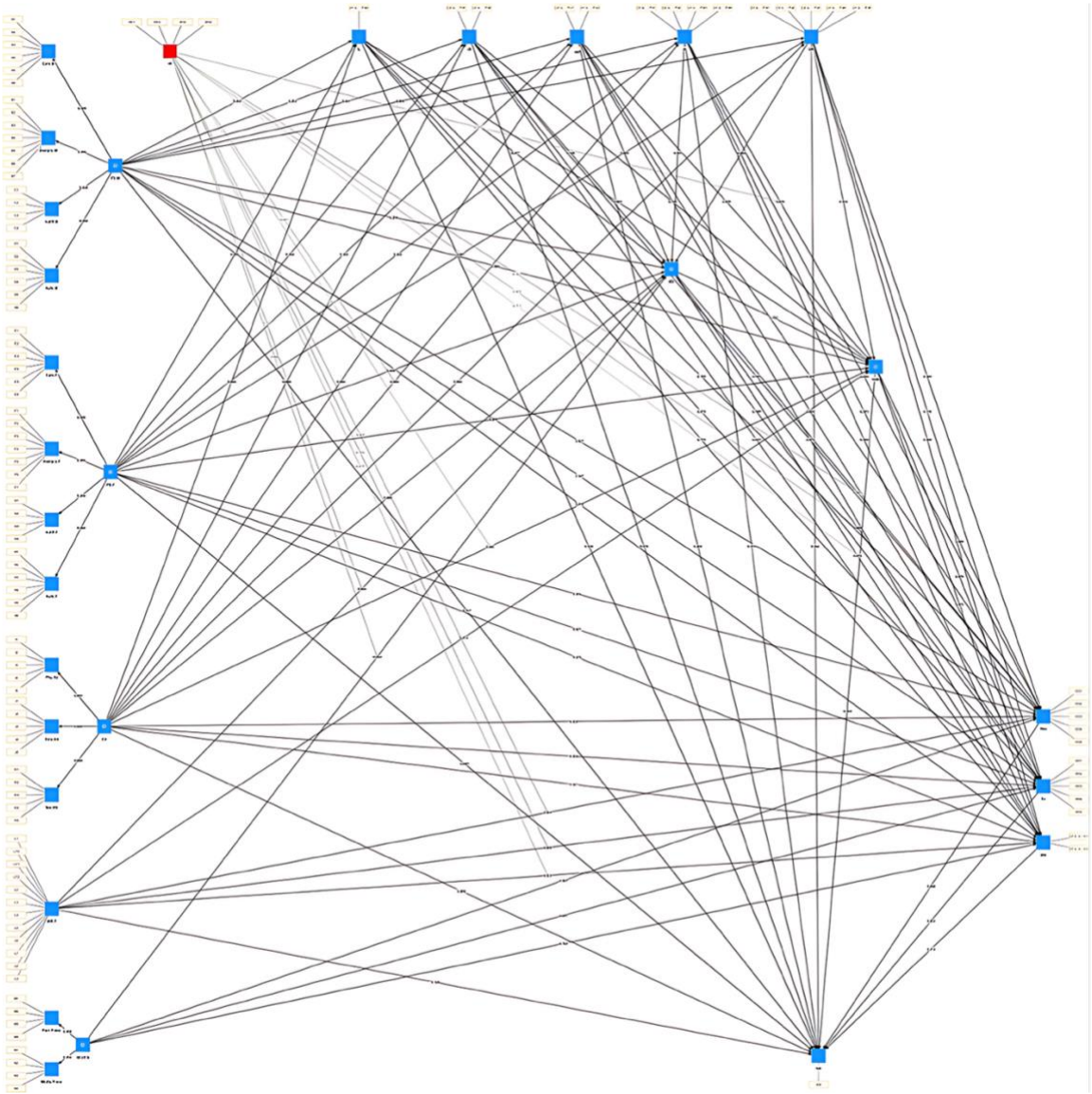


Figure 5.11

Iranian Statistical Model with the Moderator (in Red)



The results of the moderated mediation analysis have been presented in Table 5.14. Accordingly, in neither the Spanish nor Iranian models, no significant moderated mediation was found. In other words, none of the common mediations between the Spanish and Iranian samples were moderated by that society's culture (horizontal collectivism or horizontal individualism).

In light of the yielded non-significant moderated mediations, our next step of action involved doing separate analyses for the mediations and moderations, as outlined in the decision tree presented during the third session of the PLS2022 Conference Prelude Sessions (Nitzl et al., 2021).

Table 5.14

Moderated Mediation Analysis for the Spanish and Iranian Models

Common Significant Mediations	Moderated Relationships	Moderation Analysis for Spanish Model			Moderation Analysis for Iranian Model		
		Path Coefficient (β)	Index of Moderated Mediation (β)	Significance (pvalue/ 95% Confidence Interval [Lower Level, Upper Level])	Path Coefficient (β)	Index of Moderated Mediation (β)	Significance (pvalue/ 95% Confidence Interval [Lower Level, Upper Level])
C -> Fb -> H	C -> Fb	.234	.274	.209 [-.28, .40]	.009	-.051	.846 [-.18, .05]
	Fb -> H	.04			-.06		
D -> G -> Ia	D -> G	.0002	.01	.995 [-.03, .09]	.005	.015	.801 [-.02, .06]
	G -> Ia	.01			.01		
D -> G -> Ib	D -> G	.0003	-.01	.994 [-.06, .02]	.010	.01	.739 [-.01, .03]
	G -> Ib	-.01			.004		
D -> G -> Ic	D -> G	.0002	-.01	.994 [-.05, .03]	.003	.003	.835 [-.02, .02]
	G -> Ic	-.01			.002		
E -> G -> Ia	E -> G	-.025	-.005	.597 [-.07, .13]	.017	.017	.446 [-.03, .03]
	G -> Ia	.02			-.0004		
E -> G -> Ib	E -> G	-.037	-.057	.466 [-.10, .04]	.035	.035	.168 [-.02, .01]
	G -> Ib	-.02			-.0007		
E -> G -> Ic	E -> G	-.027	-.067	.515 [-.12, .02]	.012	.012	.512 [-.02, .01]
	G -> Ic	-.04			-.001		

Note. The index of moderated mediation is calculated by summing the obtained path coefficients of two moderated relationships within a mediation; The significance of the index of moderated mediation is determined by pvalue in the first-stage conditional model and by the confidence interval in the second-stage conditional model; C = childhood abuse; D = weight-related teasing; E = sociocultural attitudes toward appearance; Fb = Impaired autonomy schema domain (Spanish model)/ impaired autonomy and performance schema domain (Iranian model); G = body dissatisfaction; H = general self-efficacy; Ia = restraint; Ib = eating concern; Ic = bulimia nervosa.

5.4.2.5.2 Simple Moderation Analysis

Regardless of indirect relationships (mediations), a simple moderation analysis was performed for commonly significant direct relationships between the Spanish and Iranian models. To be exact, the moderating role of horizontal collectivism and horizontal individualism was examined in significant direct effects within significant shared mediations between the Spanish and Iranian models. Table 5.15 indicates the results of the simple moderation analysis.

Table 5.15

Simple Moderation Analysis in the Spanish and Iranian Models

Moderated Effects	Spanish Model		Iranian Model	
	β	p values	β	p values
C -> Fb	-.095	.086	-.135	.006**
Fb -> H	.011	.865	-.080	.183
C -> H	-.030	.594	.014	.768
D -> G	.028	.647	.007	.882
G -> Ia	.009	.883	.082	.149
D -> Ia	.001	.989	.020	.728
G -> Ib	-.012	.821	.065	.231
D -> Ib	.059	.260	-.029	.550
G -> Ic	-.086	.239	.039	.632
E -> G	-.078	.153	.083	.095

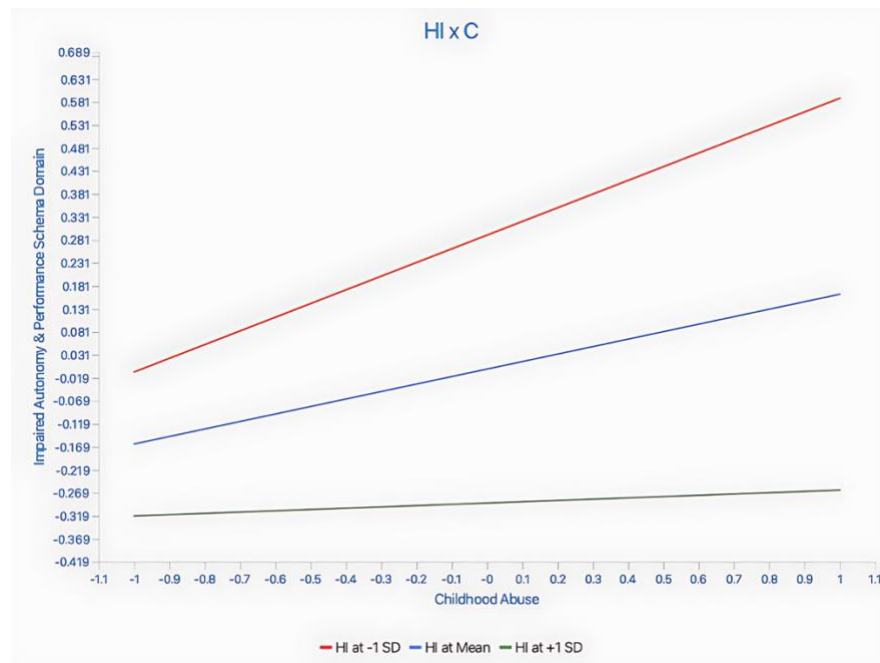
Note. C = childhood abuse; D = weight-related teasing; E = sociocultural attitudes toward appearance; Fb = impaired autonomy schema domain (Spanish model)/ impaired autonomy and performance schema domain (Iranian model); G = body dissatisfaction; H = general self-efficacy; Ia = restraint; Ib = eating concern; Ic = bulimia nervosa; * p value < .05; ** p value < .01.

As shown in Table 5.15, only the direct effect between childhood abuse and impaired autonomy and performance schema domain was significantly and negatively moderated by horizontal individualism in the Iranian model ($\beta = -.135$, pvalue = .006). This indicates that with an increase in horizontal individualism, the relationship between childhood abuse and impaired autonomy and performance schema domain is weakened. No other relationship was significantly moderated by horizontal individualism or horizontal collectivism, neither in the Spanish nor the Iranian models.

Moreover, the slope analysis was conducted to better understand the nature of the simple moderating effect. As shown in Figure 5.12, the line is much steeper for low horizontal individualism, indicating that at low levels of horizontal individualism, the impact of childhood abuse on impaired autonomy and performance schema domain is much stronger in comparison to high levels of horizontal individualism. However, at higher levels of horizontal individualism, the line is straight, indicating that at higher levels of horizontal individualism, the increase in childhood abuse does not lead to a similar change in the impaired autonomy and performance schema domain. In conclusion, higher horizontal individualism does not seem to change the impact of childhood abuse on the impaired autonomy and performance schema domain.

Figure 5.12

Slope Analysis for the Significant Simple Moderation



Furthermore, the F-square effect size of the moderating effect was .026. According to Cohen (1988), values of .02, .15, and .035 show small, medium, and large effect sizes of moderation, respectively. Thus, our findings confirm that there is a medium negative moderation effect in the Iranian model; in other words, the horizontal individualism weakens the relationship between childhood abuse and the impaired autonomy and performance schema domain at a medium level. This shows that the moderating effect averagely contributes to explaining the endogenous construct, which is the impaired autonomy and performance schema domain.

On the other hand, the R-square effect size for the impaired autonomy and performance schema domain was .137 without the inclusion of the moderating effect, implying that 13.7% of the change in this schema domain is accounted by maternal parenting styles, paternal parenting styles, and childhood abuse. Interestingly, with the inclusion of the interaction term (the moderating effect), the R-square value rose to 24.8%, showing an increase of 11.1% in variance explained in the impaired autonomy and performance schema domain.

5.5 Discussion

The present study had three general objectives: first, to examine the indirect effects of parenting style, childhood abuse, weight-related teasing, and sociocultural attitudes towards appearance (peer and media pressures) on eating disorder symptoms through the mediating roles of early maladaptive schemas and body dissatisfaction; second, to assess the indirect effects of parenting style, childhood abuse, and weight-related teasing on academic achievement through the mediating roles of early maladaptive schemas, body dissatisfaction, general self-efficacy, and eating disorder symptoms; and lastly, to evaluate the difference in the hypothesized mediations between two diverse cultural groups of Spanish and Iranian undergraduate students. Therefore, based on an in-

depth review of the scholarly literature presented in Chapter 3, a novel and comprehensive model was proposed for the etiology of eating disorder symptoms and poor academic achievement among the high-risk group of undergraduate university students, which was characterized by encompassing all previously established risk factors associated with the onset of eating disorder symptoms while presenting a new perspective on how these factors interact with one another. By this newly conceptualized model, early maladaptive schema domains, body dissatisfaction, and general self-efficacy mediated the influence of parenting style, childhood abuses, weight-related teasing, and peer and media pressures to be thin on the eating disorder symptoms and academic achievement. Subsequently, to determine whether the hypothesized relationships in this model are culture-dependent, the model was evaluated using two culturally distinct Spanish (south European) and Iranian (south Asian) samples, which have been previously documented to exhibit divergent collectivist orientations, namely horizontal and vertical, respectively (García & Gracia, 2014a; Gouveia et al., 2003).

Prior to discussing the outcomes in terms of research hypotheses, we will first address the findings obtained from the comparison of participants' mean scores in the employed instruments:

The mean scores of Iranian students on the individualism-collectivism measure indicate that despite earlier notions implying that the dominant cultural values in Iran are vertical collectivism (García & Gracia, 2014a), characterized by encouraging obedience to authorities and sacrificing for others (Triandis & Gelfand, 1998b), apparently, cultural values in Iran have shifted towards horizontal individualism, which is defined by being unique and doing your own thing (Triandis, 2001). Although this finding may not be applied to the entire Iranian population, it aligns with the theory of social change and human development. This theory suggests that with societies transitioning from *Gemeinschaft* to *Gesellschaft*, which involves progressing from the limited

economic, educational, and urbanization conditions towards a more prosperous state, a change from collectivism to individualism commonly occurs (Bi et al., 2020; Greenfield, 2009).

Given that Iran is a developing country situated in south Asia and the Middle East, this shift in cultural values can potentially be attributed to the global developments during the last decade, especially in the field of technology. Accordingly, undergraduate students, who fall within the age range of 18 to 25 and constitute a significant portion of the youth population, have spent most of their lives in the past decade. Consequently, in comparison to older generations, they have inevitably been exposed to significant advancements in knowledge and awareness, which has resulted in the adoption of new cultural values centered around individualism, personal growth, and pursuing personal goals. This finding is interestingly consistent with that of Zhou et al. (2018), who have reported a decline in child obedience across generations.

Moreover, the present study revealed that Iranian undergraduates report lower perceived maternal and paternal care as well as autonomy encouragement, while higher perceived maternal and paternal overprotection. This finding is in accordance with the result of the research conducted by Bianchi (2016), who showed that the importance of autonomy encouragement is decreased during the transition towards *Gesellschaft*, a societal phase characterized by increased knowledge and awareness. Furthermore, less parental care, autonomy encouragement, and more parental overprotection experienced by Iranian participants are compatible with another finding of this study showing that Iranian youth reported higher levels of emotional abuse. In other words, receiving low levels of parental warmth and high levels of control may manifest as feelings of neglect, being treated in a cold way, a lack of understanding, and perhaps emotional abuse.

The Iranian sample also exhibited a higher BMI, weight-related teasing victimization, and peers' pressure to lose weight. There are multiple factors that can contribute to an elevated BMI,

but a potential explanation from a cultural perspective could be the religious context in Iran as an Islamic nation, in which women are required to cover their bodies when outside of their homes, including at educational institutions like schools and universities. This cultural practice may inadvertently lead to a lack of concern about weight gain and subsequently result in an elevated body mass index. On the other hand, within Iranian society, it is commonplace to comment on an individual's body weight. This cultural inclination may serve as a plausible rationale for the high levels of weight-related teasing and peers' pressure experienced by Iranian undergraduates.

Iranian students were also found to face less media pressure for being thin, which could be due to the country's current restrictions on access to social media platforms such as YouTube and Instagram.

Spanish students, on the other hand, revealed a continued appreciation for horizontal collectivism. This result, despite being unexpected compared to the Iranian sample, may imply that young adults in Spain, a developed country in southern Europe, have not gone through dramatic transformations that lead to the absorption of new cultural values. Instead, the shift from *Gemeinschaft* to *Gesellschaft* has occurred gradually. Moreover, they reported doing more compensatory behaviors, such as excessive exercise. Considering this result, one possible explanation could be that, in comparison to the Iranian sample, doing workouts and sports in general is more common among Spanish youth; a lifestyle difference between two countries has led to different results in one behavioral pattern related to bulimia nervosa. Whereas no other significant difference was observed in measured symptoms of eating disorders in this study. Now, we will discuss our findings in terms of the general objectives of this research and related hypothesized mediations.

As our first general objective, we sought to investigate the indirect influence of parenting style, childhood abuse, weight-related teasing, and peer and media pressures on eating disorder symptoms through the mediating roles of early maladaptive schemas and body dissatisfaction. Accordingly, we particularly aimed to a) examine the mediating roles of early maladaptive schemas and body dissatisfaction in the relationship between parenting style and eating disorder symptoms, b) examine the mediating roles of early maladaptive schemas and body dissatisfaction in the relationship between childhood abuse and eating disorder symptoms, and c) examine the mediating role of body dissatisfaction in the relationships that weight-related teasing and sociocultural attitudes towards appearance have with eating disorder symptoms. Hence, we proposed three hypotheses, each of which included some sub-hypotheses:

Hypothesis 1a-d: Early Maladaptive Schema Domains and Body Dissatisfaction Mediate the Effect of Parenting Style on Eating Disorder Symptoms.

Sub-Hypothesis 1a: Early maladaptive schema domains mediate the effect of parenting style on eating disorder symptoms.

Our findings revealed that, in the Spanish sample, the disconnection schema domain significantly and fully mediated the relationship between father's parenting style and eating concern, and sub-hypothesis 1a was confirmed. In other words, results indicated that all the effect of paternal parenting style on eating concern is passed through the disconnection schema domain. Therefore, paternal parenting style did not directly lead to eating concern development. In terms of the indirect influence of paternal parenting style on disordered eating symptoms, our finding is in agreement with the results obtained by Khosravi et al. (2023), who found that paternal authoritarian parenting style has a significant indirect effect on disturbed eating. Brown et al. (2016a) also concluded that negative paternal parenting styles significantly and indirectly

impact restricting symptoms. Moreover, regarding the mediating role of maladaptive schemas in the relationship between paternal parenting and eating disorder symptoms, our result is in line with that obtained by Jones et al. (2006), who reported that defectiveness/shame, abandonment/instability, and vulnerability to harm and illness schemas significantly mediate the effect of paternal rejection and protection on drive for thinness. Furthermore, Turner et al. (2005a) found that defectiveness/shame and dependence/incompetence schemas significantly and fully mediate the relationship between paternal care and eating disorder symptoms. This shows that not only does the paternal parenting style have an indirect effect on eating disorder symptoms, but this indirect relationship is also mediated by early maladaptive schemas, especially in the disconnection and rejection as well as impaired autonomy and performance domains.

According to the theory of schema therapy, schemas in the disconnection and rejection schema domain are involved with an unmet need of secure attachment (Young et al., 2003). In other words, since a human's first attachment issues occur in the relationship with early caregivers (i.e., parents), if this parent-child relationship fails to meet the child's need for secure attachment, schemas in the disconnection and rejection domain are formed (Young et al., 2003), which can directly influence the development of eating disorder symptoms (Gerges et al., 2022). Our study, in line with previous findings, highlights the importance of fathers' role in this regard.

Sub-Hypothesis 1b: Body dissatisfaction mediates the effect of parenting style on eating disorder symptoms.

In this study, in none of the Spanish or Iranian samples, body dissatisfaction did not significantly mediate the effect of maternal or paternal parenting styles on the symptoms of

disordered eating (eating concern, restraint, or bulimia nervosa), and the sub-hypothesis 1b was rejected. Although it has previously been reported that parenting style can predict the development of body dissatisfaction (Chen et al., 2020; Patton, Beaujean, et al., 2014; Pellerone et al., 2017b) and body dissatisfaction is one of the most important risk factors for disordered eating (Pennesi & Wade, 2016c), our finding matches what was observed in an earlier study conducted by Cella et al. (2020), who also concluded that there is no significant indirect effect between parenting styles and disordered eating through body shame. Conversely, this result is in contrast with that of Gonçalves et al. (2020), who showed that body dissatisfaction fully mediates the effect of invalidating parental behaviors on eating disorder symptoms.

Sub-Hypothesis 1c: Early maladaptive schema domains and body dissatisfaction sequentially mediate the effect of parenting style on eating disorder symptoms.

Our results showed no significant serial mediation of early maladaptive schemas and body dissatisfaction in the relationship between parenting styles and eating disorder symptoms in either of the two samples. Hence, sub-hypothesis 1c was not supported in this study. Although previous research has shown that parenting style significantly and directly predicts the development of early maladaptive schemas (Maçik, 2021; Salari et al., 2022a; Saritas-Atalar & Altan-Atalay, 2020; Shute et al., 2019), early maladaptive schemas have a significant direct effect on body dissatisfaction (Boone et al., 2013; Kimball et al., 2019a), and body dissatisfaction, in turn, significantly and directly predicts symptoms of eating disorder (Barney et al., 2022; Bell et al., 2016; Boone et al., 2014; Buckingham-Howes et al., 2018; Castellano et al., 2021; Chen et al., 2021, 2023; Dakanalis et al., 2015; Duarte & Pinto-Gouveia, 2017; Iannaccone et al., 2016; Khodabakhsh et al., 2015; Marshall et al., 2020; Palmeroni et al., 2020; Schaefer et al., 2018; Tylka, 2004; Weinberger-Litman et al., 2018; Welch et al., 2009; Yang

et al., 2022; Zeigler-Hill & Noser, 2015), to the best of our knowledge, this study is the first to examine the serial mediating effects of early maladaptive schema domains and body dissatisfaction in the relationship between parenting style and eating disorder symptoms.

Sub-Hypothesis 1d: Early maladaptive schema domains mediate the effect of parenting style on body dissatisfaction.

In none of the two samples of this study, neither a direct nor an indirect effect of maternal or paternal parenting style on body dissatisfaction was found to be statistically significant. Therefore, the sub-hypothesis 1d was not supported. This outcome is consistent with data obtained from prior research (Cella et al., 2020; Cheng & Mallinckrodt, 2009; Patton et al., 2014). Cella et al. (2020) reported that there is no significant impact of parental care and overprotection on body shame. Moreover, Patton et al. (2014) found that paternal care does not have a significant direct effect on body image dissatisfaction. Similarly, Cheng and Mallinckrodt (2009) concluded that there is no significant direct effect of paternal care on body image dissatisfaction. However, in terms of the indirect relationship between parenting style and body dissatisfaction, our findings are in contrast with other sections of results obtained by Cheng and Mallinckrodt (2009) and Patton et al. (2014). In both studies, it was found that maternal and paternal care have a significant indirect effect on body image dissatisfaction. Nevertheless, no other study to date has investigated the mediating role of early maladaptive schemas in the relationship between parenting style and body dissatisfaction.

Hypothesis 2a-e: Early Maladaptive Schema Domains and Body Dissatisfaction Mediate the Effect of Childhood Abuse on Eating Disorder Symptoms.

Sub-Hypothesis 2a: Early maladaptive schema domains mediate the effect of childhood abuse on eating disorder symptoms.

Based on our findings, in the Spanish sample, the disconnection schema domain significantly and fully mediated the effect of childhood abuse on restraint and eating concern, and sub-hypothesis 2a was confirmed. This result is in line with those of previous studies (Jenkins et al., 2013; Meneguzzo et al., 2021; Waller et al., 2001). Accordingly, Meneguzzo et al. (2021) have recently reported that the disconnection/rejection schema domain significantly and partially mediates the relationship between childhood trauma and disordered eating symptoms. Moreover, Jenkins et al. (2013) found that mistrust/abuse beliefs fully mediate the relationship between emotional abuse and the drive for thinness, while abandonment/instability schema partially mediates the relationship between sexual abuse and bulimia symptoms. Furthermore, Waller et al. (2001) showed that abandonment/instability and mistrust/abuse schemas mediate the effect of sexual abuse on bingeing, and defectiveness/shame schema partially mediates the relationship between sexual abuse and vomiting. Additionally, in terms of the significant indirect effect of childhood abuse on eating disorder symptoms, our findings are consistent with previous research (Bou Khalil et al., 2020; Dworkin et al., 2014; Hund & Espelage, 2005; Mazzeo & Espelage, 2002; Vartanian et al., 2018). As stated in the schema therapy theory, toxic early experiences are key factors in the development of early maladaptive schemas (Young et al., 2003), which have been found to be risk factors for the emergence of eating disorder symptoms (Pennesi & Wade, 2016d).

These results, along with previous findings, emphasize the role of 1) early abuse in the development of the schemas within the disconnection and rejection domain, which is related to the need for secure attachment; and 2) early abuse in the development of eating disorder

symptoms such as restraint and eating concern (symptoms of anorexia nervosa). Furthermore, our findings imply that early maladaptive schemas, especially those in the disconnection/rejection domain, can pass the whole effect of childhood abuse to the symptoms of anorexia, indicating the importance of the role of schemas in this domain in the relationship between experiencing abuse during childhood and later onset of anorexia symptoms.

Sub-Hypothesis 2b: Body dissatisfaction mediates the effect of childhood abuse on eating disorder symptoms.

The results of this research did not confirm the mediating role of body dissatisfaction in the relationship between childhood abuse and eating disorder symptoms, in none of the Spanish or Iranian samples. Thus, sub-hypothesis 2b was rejected. This outcome is consistent with data obtained in two prior studies (Williams & Gleaves, 2003b; Wonderlich et al., 2001). Williams and Gleaves (2003a) reported that body dissatisfaction did not significantly mediate the effect of childhood sexual abuse on disordered eating. Wonderlich et al. (2001) also found that body image disturbance does not mediate the relationship between childhood sexual abuse and eating disturbance. On the other hand, our finding is in contrast to those of O’Loughlen et al. (2023) and Preti et al. (2006), who have found that body dissatisfaction mediates the impact of sexual abuse on symptoms of eating disorder. Nevertheless, although previous research has shown that emotional, sexual, and physical abuse are related to body dissatisfaction (Dunkley et al., 2010; Kremer et al., 2013; Treuer et al., 2005), the mediating role of body dissatisfaction has not been studied in the relationship between emotional and physical abuse and disordered eating so far.

Sub-Hypothesis 2c: Early maladaptive schema domains and body dissatisfaction sequentially mediate the effect of childhood abuse on eating disorder symptoms.

According to our findings, in the Spanish sample, a significant and full double mediation effect of the disconnection schema domain and body dissatisfaction was observed in the relationship between childhood abuse and symptoms of disordered eating namely, eating concern and restraint. Therefore, the sub-hypothesis 2c was supported. In other words, childhood abuse predicted early maladaptive schemas, early maladaptive schemas predicted body dissatisfaction, and body dissatisfaction, in turn, predicted restraint and eating concern. Hence, all the impact from childhood abuse to symptoms of anorexia nervosa was passed through the serial mediation effect of disconnection/rejection schema domain and body dissatisfaction. Notably, childhood abuse had not a significant direct effect on eating disorder symptoms. This finding is in line with prior studies reporting the indirect effect of childhood abuse on eating disorder symptoms (Bou Khalil et al., 2020; Dworkin et al., 2014; Hund & Espelage, 2005; Mazzeo & Espelage, 2002; Vartanian et al., 2018). Nevertheless, up to now, this study is the first to investigate the sequential mediation of early maladaptive schema domains and body dissatisfaction in the link between childhood abuse and eating disorder symptoms. Furthermore, this finding, once again, highlights the importance of the role of the disconnection/rejection schema domain in the development of disordered eating.

Sub-Hypothesis 2d: Body dissatisfaction mediates the effect of early maladaptive schema domains on eating disorder symptoms.

Our results showed that, in the Spanish sample, body dissatisfaction significantly and partially mediated the effect of disconnection/rejection schema domain on restraint and eating concern; significantly and fully mediated the effect of disconnection schema domain on bulimia nervosa; significantly and fully mediated the effect of impaired limits schema domain on all eating disorder symptoms (restraint, eating concern, and bulimia nervosa); and significantly and

fully mediated the effect of exaggerated goals schema domain on restraint and eating concern. On the other hand, in the Iranian sample, body dissatisfaction was a full mediator for the relationship between impaired autonomy and performance schema domain and all symptoms of eating disorder (restraint, eating concern, and bulimia nervosa). Therefore, the sub-hypothesis 2d was supported.

These findings are consistent with those of Kimball et al. (2019a) who found that body dissatisfaction significantly mediates the effect of abandonment/instability, mistrust/abuse, social isolation, defectiveness/shame, and unrelenting standards schemas (mostly schemas in the disconnection/rejection domain) on symptoms of disordered eating namely, food restriction and binge-purging. Regarding the indirect effect of schema domains on eating disorder symptoms, our results are in line with those of earlier studies (De Paoli et al., 2017; Gerges et al., 2022; Legenbauer et al., 2018). Accordingly, De Paoli et al. (2017) found that emotional deprivation schema, which is in the disconnection/rejection domain, has a significant indirect effect on disordered eating through the full mediation of sensitivity towards appearance and interpersonal rejection. They also concluded that there is a significant indirect effect of abandonment/instability schema, which is also in the disconnection/rejection domain, on symptoms of disordered eating through the partial mediation of the same variable. Moreover, Lengenbauer et al. (2018) found that there is a significant indirect effect of disconnection/rejection schema domain on binge eating symptoms through full mediation of thoughts about eating and loss of control. Furthermore, in terms of the confirmed indirect relationship between impaired limits schema domain and all eating disorder symptoms, the result of this study is in line with that of Gerges et al. (2022), who have recently reported that the impaired limits schema domain has a significant indirect influence on disordered eating symptoms, through the partial

mediation of emotion regulation difficulty. Our findings regarding the full mediation of body dissatisfaction in the relationship that schema domains have with symptoms of anorexia and bulimia nervosa may imply that, almost in different cultural contexts, early maladaptive schemas do not directly influence the onset of eating disorder symptoms, but this impact is passed through body dissatisfaction.

Sub-Hypothesis 2e: Early maladaptive schema domains mediate the effect of childhood abuse on body dissatisfaction.

Our results indicated that, in the Spanish sample, the disconnection/rejection schema domain significantly and fully mediated the relationship between childhood abuse and body dissatisfaction. Therefore, the sub-hypothesis 2e was confirmed. To our knowledge, this is the first study to examine the mediating role of schema domains in the relationship between childhood abuse and body dissatisfaction, in which an early maladaptive schema domain was identified as the ideal (full) mediator. However, in terms of the significant indirect effect of childhood abuse on later body dissatisfaction, our finding is in line with previous studies implying trivial or no significant direct influence of childhood abuse on body dissatisfaction (Bödicker et al., 2022a; Dunkley et al., 2010; Williams & Gleaves, 2003b). Moreover, consistent with our result, previous research has confirmed the significant direct effect of childhood abuse on maladaptive schema domains (Boyda et al., 2018; Estévez et al., 2016, 2019; Feyzioglu et al., 2022; Gay et al., 2013; Mojallal et al., 2021a; Shojaati et al., 2021), as well as the significant direct impact of schema domains on body dissatisfaction (Boone et al., 2013; Kimball et al., 2019a).

Hypothesis 3a-b: Body Dissatisfaction Mediates the Effects of Weight-Related Teasing and Sociocultural Attitudes Towards Appearance on Eating Disorder Symptoms.

Sub-Hypothesis 3a: Body dissatisfaction mediates the effect of weight-related teasing on eating disorder symptoms.

Our results showed that, in both Spanish and Iranian samples, body dissatisfaction significantly mediated the effect of weight-related teasing on restraint, eating concern, and symptoms of bulimia nervosa. In the Spanish sample, body dissatisfaction was a partial mediator for the relationship that weight-related teasing has with restraint and eating concern, and a full mediator for the relationship between weight-related teasing and bulimia nervosa symptoms. However, in the Iranian sample, body dissatisfaction partially mediated the relationship between weight-related teasing and all symptoms of eating disorder, namely, restraint, eating concern, and bulimia nervosa. Therefore, the sub-hypothesis 3a was supported.

Regarding the finding that in both samples body dissatisfaction partially mediates the relationship between weight-related teasing and symptoms of anorexia nervosa (restraint and eating concern), it seems that regardless of culture, weight-related teasing can directly lead to the onset of dieting behaviors such as restraint and eating concern. However, one possible explanation for the other result, which shows that body dissatisfaction partially mediates the relationship between weight-related teasing and bulimia nervosa symptoms in the Iranian sample but fully mediates the same relationship in the Spanish sample, could be that, in some cultures, weight-related teasing does not directly influence the development of bingeing or compensatory behaviors, but the body dissatisfaction resulting from such teasing leads to the development of disordered eating.

Notably, our findings are in line with those of Benas and Gib (2008), who reported that body dissatisfaction partially mediates the effect of weight-related teasing on binge eating and bulimia nervosa. However, they are in contrast with that of Zimmer-Gembeck et al. (2021), who found no significant indirect effect of peer and family teasing on symptoms of disordered eating through appearance concern.

Sub-Hypothesis 3b: Body dissatisfaction mediates the effect of sociocultural attitudes towards appearance on eating disorder symptoms.

According to the yielded results, in both Spanish and Iranian samples, body dissatisfaction significantly and fully mediated the relationship between sociocultural attitudes towards appearance (peer and media pressures to be thin) and symptoms of eating disorder such as restraint, eating concern, and bulimia nervosa. Hence, the sub-hypothesis 3b was confirmed. The full mediation of body dissatisfaction in the relationship between peer and media pressures and eating disorder symptoms in both samples may indicate that regardless of the cultural context, external perceived pressures such as media and peer pressures to be thin do not have a direct impact on the development of eating disorder symptoms, but this effect is fully passed through body dissatisfaction. This finding is consistent with those of previous studies examining the indirect effect of media and peer pressure on symptoms of disordered eating (Blodgett Salafia & Gondoli, 2011; Fortes et al., 2015; Reina et al., 2013). Accordingly, Blodgett Salafia and Gondoli (2011) found a significant indirect effect of peer pressure on dieting (restraint) behaviors. Fortes et al. (2015) reported that body dissatisfaction significantly and partially mediates the relationship between media pressure and disordered eating. Moreover, Reina et al. (2013) concluded that being preoccupied with getting overweight significantly mediates the effect of media and peer pressure to be thin on disordered eating,

namely eating in the absence of hunger. However, our results are contrary to those obtained in two previous studies (Lam et al., 2009; Scheiber et al., 2023). Lam et al. (2009) have reported that body dissatisfaction does not significantly mediate the effect of media and peer pressure on restraint. Furthermore, in a very recent study by Scheiber et al. (2023), no significant mediation of body dissatisfaction was observed in the relationship between media pressure and orthorexia nervosa, which is characterized by preoccupation with food quality.

The second general objective of this study was to examine the mediating roles of early maladaptive schemas, body dissatisfaction, general self-efficacy, and eating disorder symptoms in the effects of parenting style, childhood abuse, and weight-related teasing on academic achievement. Accordingly, we particularly aimed to a) examine the mediating roles of early maladaptive schemas, body dissatisfaction, and eating disorder symptoms in the relationship between parenting style and academic achievement, b) examine the mediating roles of early maladaptive schemas, body dissatisfaction, and eating disorder symptoms in the relationship between childhood abuse and academic achievement, c) examine the mediating roles of body dissatisfaction and eating disorder symptoms in the relationship between weight-related teasing and academic achievement, d) examine the mediating roles of early maladaptive schemas and general self-efficacy in the relationship between parenting styles, childhood abuse and academic achievement, and to e) examine the mediating roles of body dissatisfaction and general self-efficacy in the relationships that childhood abuse and weight-related teasing have with academic achievement. Therefore, five hypotheses were proposed, each of which included some sub-hypotheses:

Hypothesis 4a-d: Early Maladaptive Schema Domains, Body Dissatisfaction, and Eating Disorder Symptoms Mediate the Effect of Parenting Style on Academic Achievement.

Based on the results, the indirect effect of parenting style on academic achievement was not significantly mediated by schema domains, body dissatisfaction, or eating disorder symptoms (neither separately nor sequentially); Thus, the fourth hypothesis and all its sub-hypotheses were rejected in both Spanish and Iranian samples. In the Spanish model, however, findings revealed a significant direct relationship between paternal parenting style and academic achievement, which is in line with previous research demonstrating that parenting style has a significant direct effect on children's academic achievement (Kenney et al., 2015; Stavroulaki et al., 2021; Turner et al., 2005b). On the other hand, our finding is in contrast with that of Pinquart and Kauser (2018a), who reported that the relationship between parenting style and academic achievement is stronger in Muslim countries, while in our study no relationship was found between parenting style and academic achievement in the Muslim (Iranian) sample.

Sub-Hypothesis 4a: Early maladaptive schema domains, body dissatisfaction, and eating disorder symptoms sequentially mediate the effect of parenting style on academic achievement.

Although Studies conducted by prior researchers have confirmed that parenting style has a significant direct impact on the development of early maladaptive schemas (Maçik, 2021; Salari et al., 2022a; Saritas-Atalar & Altan-Atalay, 2020; Shute et al., 2019), early maladaptive schemas predict body dissatisfaction development (Boone et al., 2013; Kimball et al., 2019a), body dissatisfaction leads to the onset of symptoms of disordered eating (Barney et al., 2022; Bell et al., 2016; Boone et al., 2014; Buckingham-Howes et al., 2018; Castellano et al., 2021; Chen et al., 2021, 2023; Dakanalis et al., 2015; Duarte & Pinto-Gouveia, 2017; Iannaccone et al., 2016; Khodabakhsh et al., 2015; Marshall et al., 2020; Palmeroni et al., 2020; Schaefer et

al., 2018; Tylka, 2004; Weinberger-Litman et al., 2018; Welch et al., 2009; Yang et al., 2022; Zeigler-Hill & Noser, 2015), and eating disorder symptoms, in turn, have a significant negative effect on academic achievement (Filipova & Stoffel, 2016; Serra et al., 2020), our findings indicated that early maladaptive schema domains, body dissatisfaction, and eating disorder symptoms did not have a significant triple mediating role in the relationship between parenting style and academic achievement. Thus, the sub-hypothesis 4a was not supported. Nevertheless, this research is the first to address the serial mediating effect of early maladaptive schemas, body dissatisfaction, and eating disorder symptoms in the relationship between parenting style and academic achievement.

Sub-Hypothesis 4b: Early maladaptive schema domains mediate the effect of parenting style on academic achievement.

According to the results, early maladaptive schema domains did not significantly mediate the effect of parenting style on academic achievement, and the sub-hypothesis 4b was not supported. Although previous research has shown that parenting style has a significant direct effect on children's academic achievement (Kenney et al., 2015; Stavroulaki et al., 2021a; Turner et al., 2005b) and a significant direct impact on early maladaptive schemas (Maçik, 2021; Salari et al., 2022a; Saritas-Atalar & Altan-Atalay, 2020; Shute et al., 2019), and maladaptive schemas, in turn, are associated with academic achievement (Ahami et al., 2017), the mediating role of early maladaptive schema domains in the relationship between parenting style and academic achievement had not been previously addressed. Hence, this research is the first to investigate this mediation.

Sub-Hypothesis 4c: Eating disorder symptoms mediate the effect of parenting style on academic achievement.

Our results indicated that eating disorder symptoms did not significantly mediate the effect of parenting style on academic achievement. Therefore, the sub-hypothesis 4c was rejected. Despite findings from earlier studies implying that parenting style has a direct impact on the development of eating disorder symptoms (Brown et al., 2016; Khosravi et al., 2023; Peleg et al., 2021), and disordered eating, in turn, influences academic achievement (Filipova & Stoffel, 2016; Serra et al., 2020), to date no other study has examined the mediating role of eating disorder symptoms in the relationship between parenting style and academic achievement.

Sub-Hypothesis 4d: Body dissatisfaction and eating disorder symptoms sequentially mediate the effect of parenting style on academic achievement.

Despite the findings of previous studies indicating that parenting styles can predict body dissatisfaction (Chen et al., 2020; Patton et al., 2014; Pellerone et al., 2017b), body dissatisfaction has a direct influence on the development of eating disorder symptoms (Barney et al., 2022; Bell et al., 2016; Boone et al., 2014; Buckingham-Howes et al., 2018; Castellano et al., 2021; Chen et al., 2021, 2023; Dakanalis et al., 2015; Duarte & Pinto-Gouveia, 2017; Iannaccone et al., 2016; Khodabakhsh et al., 2015; Marshall et al., 2020; Palmeroni et al., 2020; Schaefer et al., 2018; Tylka, 2004; Weinberger-Litman et al., 2018; Welch et al., 2009; Yang et al., 2022; Zeigler-Hill & Noser, 2015), and symptoms of eating disorder, in turn, affect academic achievement (Filipova & Stoffel, 2016; Serra et al., 2020), our findings showed that body dissatisfaction and eating disorder symptoms did not sequentially mediate the relationship between parenting styles and academic achievement. To date, no previous study has examined this serial mediation effect.

Hypothesis 5a-d: Early Maladaptive Schema Domains, Body Dissatisfaction, and Eating Disorder Symptoms Mediate the Effect of Childhood Abuse on Academic Achievement.

Based on our results, the indirect effect of childhood abuse on academic achievement was not significantly mediated by schema domains, body dissatisfaction, or eating disorder symptoms (neither separately nor sequentially); Hence, the fifth hypothesis and all its sub-hypotheses were rejected in both Spanish and Iranian samples. In the Iranian model, however, findings revealed a significant direct relationship between childhood abuse and academic performance, which is in agreement with previous research indicating that experiencing abuse during childhood has a significant relationship with poor academic achievement in school or university (Moore et al., 2020; Pelcovitz et al., 2017; Porche et al., 2011; Slade & Wissow, 2007; Tognin et al., 2023). Nevertheless, this result is in contrast to other studies in which no significant association was observed between childhood abuse and academic performance (Mwanguzi et al., 2023; Qu et al., 2023; Welsh et al., 2017).

Sub-Hypothesis 5a: Early maladaptive schema domains, body dissatisfaction, and eating disorder symptoms sequentially mediate the effect of childhood abuse on academic achievement.

Our results indicated that early maladaptive schema domains, body dissatisfaction, and eating disorder symptoms did not have a significant serial mediation effect in the relationship between childhood abuse and academic achievement. Hence, the sub-hypothesis 5a was not supported. Although previous research has reported that being abused during childhood has a significant and direct impact on the development of early maladaptive schemas (Boyda et al., 2018; Estévez et al., 2016, 2019; Feyzioğlu et al., 2022; Gay et al., 2013; Mojallal et al., 2021a; Shojaati et al., 2021), early maladaptive schemas significantly and directly predict dissatisfaction with body image (Boone et al., 2013; Kimball et al., 2019), and body dissatisfaction, in turn, has a significant direct effect on the development of eating disorder

symptoms (Barney et al., 2022; Bell et al., 2016; Boone et al., 2014; Buckingham-Howes et al., 2018; Castellano et al., 2021; Chen et al., 2021, 2023; Dakanalis et al., 2015; Duarte & Pinto-Gouveia, 2017; Iannaccone et al., 2016; Khodabakhsh et al., 2015; Marshall et al., 2020; Palmeroni et al., 2020; Schaefer et al., 2018; Tylka, 2004; Weinberger-Litman et al., 2018; Welch et al., 2009; Yang et al., 2022; Zeigler-Hill & Noser, 2015), which is related to poor academic achievement (Filipova & Stoffel, 2016; Serra et al., 2020), to the best of our knowledge, no other study has investigated the serial mediating role of mentioned variables in the relationship between childhood abuse and academic achievement.

Sub-Hypothesis 5b: Early maladaptive schema domains mediate the effect of childhood abuse on academic achievement.

Based on our results, early maladaptive schema domains did not significantly mediate the effect of childhood abuse on academic achievement. Hence, the sub-hypothesis 5b was not supported. Prior research has indicated that childhood abuse significantly and directly predicts the development of early maladaptive schemas (Boyda et al., 2018; Estévez et al., 2016, 2019; Feyzioğlu et al., 2022; Gay et al., 2013; Mojallal et al., 2021a; Shojaati et al., 2021), and early maladaptive schemas, in turn, are associated with academic performance (Ahami et al., 2017). Moreover, the significant association between childhood trauma, namely physical, emotional, and sexual abuse and academic performance has previously been confirmed (Moore et al., 2020; Pelcovitz et al., 2017; Porche et al., 2011; Slade & Wissow, 2007; Tognin et al., 2023). Nevertheless, no other study to this date has investigated the mediating role of early maladaptive schemas in the relationship between childhood abuse and academic achievement.

Sub-Hypothesis 5c: Eating disorder symptoms mediate the effect of childhood abuse on academic achievement.

According to our findings, the effect of childhood abuse on academic achievement was not significantly mediated by symptoms of disordered eating, and the sub-hypothesis 5c was rejected. Although prior studies have reported that childhood abuse significantly and directly predicts eating disorder symptoms (Bou Khalil et al., 2020; Burns et al., 2012; Fischer et al., 2010; Gomez et al., 2020; Hopwood et al., 2011; Hymowitz et al., 2017; Kong & Bernstein, 2009; Tasca et al., 2013; S. A. Wonderlich et al., 2007), and eating disorder symptoms, in turn, significantly and directly influence academic achievement (Filipova & Stoffel, 2016; Serra et al., 2020b), this research is the first to address the mediation effect of eating disorder symptoms in the relationship between childhood abuse and academic achievement.

Sub-Hypothesis 5d: Body dissatisfaction and eating disorder symptoms sequentially mediate the effect of childhood abuse on academic achievement.

In the present study, no significant double mediation effect of body dissatisfaction and eating disorder symptoms was observed in the relationship between childhood abuse and academic achievement. Consequently, sub-hypothesis 5d was not supported. Although previously published studies have shown that experiencing abuse during childhood predicts the development of body dissatisfaction (Kremer et al., 2013; Talmon & Ginzburg, 2018), body dissatisfaction leads to the onset of eating disorder symptoms (Barney et al., 2022; Bell et al., 2016; Boone et al., 2014; Buckingham-Howes et al., 2018; Castellano et al., 2021; Chen et al., 2021, 2023; Dakanalis et al., 2015; Duarte & Pinto-Gouveia, 2017; Iannaccone et al., 2016; Khodabakhsh et al., 2015; Marshall et al., 2020; Palmeroni et al., 2020; Schaefer et al., 2018; Tylka, 2004; Weinberger-Litman et al., 2018; Welch et al., 2009; Yang et al., 2022; Zeigler-Hill & Noser, 2015), which are related to poor academic achievement (Filipova & Stoffel, 2016; Serra et al., 2020b), this study is the first to address this double mediation.

Hypothesis 6a-b: Body Dissatisfaction and Eating Disorder Symptoms Mediate the Effect of Weight-Related Teasing on Academic Achievement.

Sub-Hypothesis 6a: Body dissatisfaction and eating disorder symptoms sequentially mediate the effect of weight-related teasing on academic achievement.

According to our results, in none of the Spanish or Iranian samples, body dissatisfaction and eating disorder symptoms did not have a significant serial mediation effect in the relationship between weight-related teasing and academic achievement. Thus, the sub-hypothesis 6a was not supported. Although prior studies have found that weight-related teasing significantly and directly predicts body dissatisfaction (Chen et al., 2022; Gleason et al., 2000; Gonzaga et al., 2021; Heijens et al., 2012; Kostanski & Gullone, 2007; Lunner et al., 2000b; Reddy & Crowther, 2007; Rodgers et al., 2021; Schaefer & Blodgett Salafia, 2014), body dissatisfaction significantly and directly predicts eating disorder symptoms (Barney et al., 2022; Bell et al., 2016; Boone et al., 2014; Buckingham-Howes et al., 2018; Castellano et al., 2021; Chen et al., 2021, 2023; Dakanalis et al., 2015; Duarte & Pinto-Gouveia, 2017; Iannaccone et al., 2016; Khodabakhsh et al., 2015; Marshall et al., 2020; Palmeroni et al., 2020; Schaefer et al., 2018; Tylka, 2004; Weinberger-Litman et al., 2018; Welch et al., 2009; Yang et al., 2022; Zeigler-Hill & Noser, 2015), and eating disorder symptoms, in turn, significantly and negatively predict academic performance (Filipova & Stoffel, 2016; Serra et al., 2020b), to date, no other research has examined the double mediating role of body dissatisfaction and eating disorder symptoms in the effect of weight-related teasing on academic achievement.

Sub-Hypothesis 6b: Eating disorder symptoms mediate the effect of weight-related teasing on academic achievement.

Results of this study showed that, neither in the Spanish nor Iranian samples, eating disorder symptoms did not significantly mediate the relationship between weight-related teasing and academic achievement. Therefore, the sub-hypothesis 6b was rejected. Previous research has shown that weight-related teasing victimization can significantly and directly predict poor academic performance (Krukowski et al., 2009; Lessard et al., 2021). Moreover, it has been confirmed that weight-related teasing significantly leads to the development of disordered eating symptoms (Gan et al., 2011; Guardabassi & Tomasetto, 2022; Haines et al., 2006; Hübner et al., 2016; Lunner et al., 2000b; Obeid et al., 2022; Olvera et al., 2017; Puhl et al., 2017; Rojo-Moreno et al., 2013; Rosenbaum & Bernstein, 2022; Rubin et al., 2021), and eating disorder symptoms, in turn, significantly and negatively predict academic performance (Filipova & Stoffel, 2016; Serra et al., 2020b). Nevertheless, this study was the first addressing this mediation.

Hypothesis 7a-f: Early Maladaptive Schema domains and General Self-Efficacy Mediate the Effects of Parenting Style and Childhood Abuse on Academic Achievement.

Sub-Hypothesis 7a: Early maladaptive schema domains and general self-efficacy sequentially mediate the effect of parenting style on academic achievement.

According to the results, in none of the Spanish or Iranian samples, early maladaptive schemas and general self-efficacy did not have a significant serial mediation effect in the relationship between parenting style and academic achievement, and the sub-hypothesis 7a was not supported. Although previous research has reported that parenting style has a significant direct effect on the development of early maladaptive schemas (Maçik, 2021; Salari et al., 2022a; Saritas-Atalar & Altan-Atalay, 2020; Shute et al., 2019), early maladaptive schemas

significantly predict general self-efficacy (Hosseinzadeh et al., 2021), and general self-efficacy, in turn, has a significant direct effect on academic achievement (Chang & Tsai, 2022; Li et al., 2022; Yuan et al., 2016), to this date, the sequential mediating role of early maladaptive schemas and general self-efficacy in the relationship between parenting style and academic achievement has not been examined in another study.

Sub-Hypothesis 7b: General self-efficacy mediates the effect of parenting style on academic achievement.

In this study, general self-efficacy did not significantly mediate the effect of parenting style on the academic achievement, neither in the Spanish nor Iranian samples. Therefore, the sub-hypothesis 7b was not supported.

There are three previous studies addressing the mediating role of self-efficacy in the relationship between parenting styles and academic performance, all of which have considered academic self-efficacy the mediator (Hayek et al., 2022; Llorca et al., 2017; Masud et al., 2016b). Accordingly, Hayek et al. (2022) found that academic self-efficacy significantly mediates the effect of neglectful parenting on academic performance of adolescents. Llorca et al. (2017) have reported that academic self-efficacy significantly mediates the impact of maternal and paternal authoritative parenting styles on adolescents' academic achievement. Moreover, findings of Masud et al. (2016b) indicated that academic self-efficacy significantly mediates the relationship between maternal and paternal authoritative parenting style and university students' academic achievement. Although prior studies have shown that parenting style has a significant direct effect on general self-efficacy (Guo et al., 2023; Huang et al., 2022; Ingoldsby et al., 2003; Keshavarz & Mounts, 2017; Lim & Loo, 2003; Siqueira-Campos et al., 2021), and general self-efficacy, in turn, significantly and directly predicts academic

achievement (Chang & Tsai, 2022; Li et al., 2022; Yuan et al., 2016), our study is the first to consider general self-efficacy the mediator in the relationship between parenting style and academic achievement.

Sub-Hypothesis 7c: Early maladaptive schema domains mediate the effect of parenting style on general self-efficacy.

According to our results, schema domains were not significant mediators in the relationship between parenting style and general self-efficacy in the Iranian sample. Thus, the sub-hypothesis 7c was not supported in the Iranian model. However, in the Spanish sample, impaired autonomy schema domain significantly and fully mediated the effect of paternal parenting style on general self-efficacy and the sub-hypothesis 7c was supported in this sample. This result indicates that parenting style, especially strategies applied by fathers, do not directly influence children's general self-efficacy, but firstly lead to the development of early maladaptive schemas, particularly those associated with an individual's need for independence and autonomy, and then these schemas influence general self-efficacy. Given the yielded full mediation, it seems that the impaired autonomy schema domain is an ideal mediator for the target relationship. Despite existing evidence showing that parenting style influences the development of early maladaptive schemas (Maçik, 2021; Salari et al., 2022a; Saritas-Atalar & Altan-Atalay, 2020; Shute et al., 2019), and early maladaptive schemas, in turn, impact the general self-efficacy (Hosseinzadeh et al., 2021b; Miklósi et al., 2017), no other study has addressed this mediation.

On the other hand, our results showed no significant direct effect between parenting styles and general self-efficacy in the Spanish sample. This outcome is in line with those obtained by Chen et al. (2020), who found no significant correlation between negative parenting styles and

general self-efficacy, and Lim and Loo (2003), who concluded that paternal authoritarian parenting did not significantly influence children's self-efficacy. However, in the Iranian sample, a significant direct effect was observed between paternal parenting style and general self-efficacy. This finding is consistent with those by previous researchers who have reported significant relationship and even influence between parenting style and general self-efficacy (Guo et al., 2023; Huang et al., 2022; Siqueira-Campos et al., 2021b).

Sub-Hypothesis 7d: Early maladaptive schema domains and general self-efficacy sequentially mediate the effect of childhood abuse on academic achievement.

Our findings showed that early maladaptive schema domains and general self-efficacy did not have a significant sequential mediation effect in the relationship between childhood abuse and academic achievement in none of the Spanish or Iranian samples. Hence, the sub-hypothesis 7d was rejected. Previously conducted research has shown that experiencing abuse during childhood significantly predicts the development of early maladaptive schemas (Boyda et al., 2018; Estévez et al., 2016, 2019; Feyzioğlu et al., 2022; Gay et al., 2013; Mojallal et al., 2021a; Shojaati et al., 2021), early maladaptive schemas significantly affect general self-efficacy (Hosseinzadeh et al., 2021b; Miklósi et al., 2017), and general self-efficacy, in turn, impacts academic achievement (Chang & Tsai, 2022; Li et al., 2022; Yuan et al., 2016). Nevertheless, our study is the first to examine this double mediation.

Furthermore, based on our results, the direct effect from childhood abuse to academic achievement was significant in the Iranian sample, while not significant in the Spanish sample. A possible explanation for this detected difference can be that, apparently, being abused in childhood is a risk factor for poor academic achievement only in some cultures. On the other hand, the yielded significant link between childhood abuse and later academic performance is

consistent with results obtained by Tognin et al. (2023), Moore et al. (2020), and Pelcovitz et al. (2017), who reported significant associations between emotional, physical, and sexual abuse during childhood and later academic achievement. However, this result is in contrast with findings of previous studies which have not observed a significant relationship between these two variables (Muwanguzi et al., 2023; Qu et al., 2023; Welsh et al., 2017).

Sub-Hypothesis 7e: General self-efficacy mediates the effect of childhood abuse on academic achievement.

Based on our findings, general self-efficacy did not significantly mediate the effect of childhood abuse on academic achievement in none of the Spanish or Iranian samples. Thus, the sub-hypothesis 7e was rejected. Previous research has indicated that childhood abuse is significantly correlated to academic achievement (Moore et al., 2020; Pelcovitz et al., 2017; Porche et al., 2011; Slade & Wissow, 2007; Tognin et al., 2023) and has a significant direct effect on general self-efficacy (Adjorlolo et al., 2017; Cohrdes & Mauz, 2020; Haj-Yahia et al., 2021; Lu et al., 2017; See Mey et al., 2022; Soffer et al., 2008). General self-efficacy, in turn, significantly and directly influences academic achievement (Chang & Tsai, 2022; Li et al., 2022; Yuan et al., 2016). Nonetheless, the mediating role of general self-efficacy in the relationship between childhood abuse and academic achievement has not been examined so far and this study is the first to study this mediation.

Sub-Hypothesis 7f: Early maladaptive schema domains mediate the effect of childhood abuse on general self-efficacy.

According to our findings, in both Spanish and Iranian samples, the impaired autonomy and performance schema domain significantly and partially mediated the effect of childhood abuse on general-self-efficacy. Thus, the sub-hypothesis 7f was supported. This finding shows that

regardless of culture, the impaired autonomy and performance schema domain, which is involved with the need for autonomy, competence, sense of identity, and independence, can pass a part of the effect from childhood abuse on general self-efficacy. In other words, being abused during childhood impacts the development of schemas in the autonomy and performance domain, which in turn leads to the diminished general self-efficacy. Moreover, in the Spanish sample, the exaggerated goals schema domain (including the self-sacrifice and unrelenting standards schemas) was also a significant and partial mediator in the relationship between childhood abuse and general-self-efficacy. Although previous research has reported that being abused during childhood predicts the development of early maladaptive schemas (Boyda et al., 2018; Estévez et al., 2016, 2019; Feyzioglu et al., 2022; Mojallal et al., 2021b; Shojaati et al., 2021) and early maladaptive schemas, in turn, affect general self-efficacy (Hosseinzadeh et al., 2021b; Miklósi et al., 2017), no other study has addressed this mediation to this date.

Hypothesis 8a-e: Body Dissatisfaction and General Self-Efficacy Mediate the Effects of Childhood Abuse and Weight-Related Teasing on Academic Achievement.

Sub-Hypothesis 8a: Body dissatisfaction and general self-efficacy sequentially mediate the effect of childhood abuse on academic achievement.

Our results showed that body dissatisfaction and general self-efficacy did not have a significant serial mediating role in the relationship between childhood abuse and academic achievement in none of the Spanish or Iranian samples, and the sub-hypothesis 8a was not supported. Notably, prior research has confirmed that childhood abuse has a significant direct effect on body dissatisfaction (Harned, 2000; Kremer et al., 2013; Talmon & Ginzburg, 2018;

Williams & Gleaves, 2003b), body dissatisfaction has a significant direct impact on general self-efficacy (Ouyang et al., 2020; Wang et al., 2023), and general self-efficacy, in turn, significantly and directly influences academic achievement (Chang & Tsai, 2022; Li et al., 2022; Yuan et al., 2016). Nevertheless, no other study has ever considered body dissatisfaction and general self-efficacy as sequential mediators of the relationship between childhood abuse and academic achievement.

Sub-Hypothesis 8b: Body dissatisfaction mediates the effect of childhood abuse on general self-efficacy.

Our findings indicated that body dissatisfaction did not significantly mediate the impact of childhood abuse on general self-efficacy in neither the Spanish nor the Iranian sample. Therefore, the sub-hypothesis 8b was not supported. Although it has previously been reported that childhood abuse significantly predicts later body dissatisfaction (Bödicker et al., 2022b; Kremer et al., 2013; Talmon & Ginzburg, 2018), and body dissatisfaction, in turn, is significantly related to general self-efficacy (Ouyang et al., 2020; Wang et al., 2023), this study examined this mediation for the first time. On the other hand, in both Spanish and Iranian samples, it was found that childhood abuse significantly and directly impacts general self-efficacy. This result may indicate that, regardless of the cultural context, being abused during childhood can influence an individual's belief in their abilities in later stages of life. Moreover, this finding is in line with previous findings by See May et al. (2022), Haj-Yahia et al. (2021), and Cohrdes and Mauz (2020), who have reported significant direct impact of childhood sexual, emotional, and physical abuse on general self-efficacy. However, our finding in terms of the significant direct relationship between early abuse and general self-efficacy is in contrast with the result obtained by two previous studies, in which being emotionally, sexually, or physically

abused did not have a significant impact on general self-efficacy (Adjorlolo et al., 2017; Soffer et al., 2008).

Sub-Hypothesis 8c: Body dissatisfaction and general self-efficacy sequentially mediate the effect of weight-related teasing on academic achievement.

Based on the results, body dissatisfaction and general self-efficacy did not have a significant serial mediating role in the relationship between weight-related teasing and academic achievement in neither the Spanish nor the Iranian sample. Consequently, the sub-hypothesis 8c was not supported. Prior studies have shown that weight-related teasing has a significant direct effect on body dissatisfaction (Chen et al., 2022; Gleason et al., 2000; Gonzaga et al., 2021; Heijens et al., 2012; Kostanski & Gullone, 2007; Liang et al., 2011; Lunner et al., 2000b; Reddy & Crowther, 2007; Rodgers et al., 2021; Schaefer & Blodgett Salafia, 2014), body dissatisfaction has a significant direct effect on general self-efficacy (Ouyang et al., 2020; Wang et al., 2023), and general self-efficacy has a significant direct impact on the academic achievement (Chang & Tsai, 2022; Li et al., 2022; Yuan et al., 2016). However, this research is the first to consider body dissatisfaction and general self-efficacy as sequential mediators of the effect of weight-related teasing on academic achievement.

Sub-Hypothesis 8d: General self-efficacy mediates the effect of weight-related teasing on academic achievement.

According to our findings, general self-efficacy did not significantly mediate the effect of weight-related teasing on academic achievement in none of the Spanish or Iranian samples. Therefore, the sub-hypothesis 8d was rejected. Although previous research has demonstrated that weight-related teasing has a significant negative association with self-efficacy (Greenleaf et al., 2014; Ievers-Landis et al., 2019; Losekam et al., 2010b), self-efficacy has a significant

direct effect on the academic achievement (Chang & Tsai, 2022; Li et al., 2022; Yuan et al., 2016), and also weight-related teasing significantly and directly impacts academic achievement (Krukowski et al., 2009; Lessard et al., 2021), no other researchers, to date, have investigated the mediating role of general self-efficacy in the relationship between weight-related teasing and academic achievement.

Sub-Hypothesis 8e: Body dissatisfaction mediates the effect of weight-related teasing on general self-efficacy.

Our results showed no significant mediation effect of body dissatisfaction in the link between weight-related teasing and general self-efficacy in none of the Spanish or Iranian samples. Thus, the sub-hypothesis 8e was not supported. Prior studies have shown that weight-related teasing significantly predicts body dissatisfaction (Chen et al., 2022; Gonzaga et al., 2021; Rodgers et al., 2021) and body dissatisfaction, in turn, is significantly correlated with low general self-efficacy (Ouyang et al., 2020; Wang et al., 2023). Nonetheless, this study was the first to examine the mediating role of body dissatisfaction in the effect of weight-related teasing on general self-efficacy. On the other hand, we found that, in the Spanish sample, weight-related teasing directly influences general self-efficacy, which is in accordance with findings of Ievers-Landis et al. (2019), Greenleaf et al. (2014), and Losekam et al. (2010), who have reported that weight-related teasing victimization is significantly and negatively related to physical activity self-efficacy. Notably, all these prior researchers have addressed the correlation between weight-related teasing and physical activity self-efficacy and our study is the first to address the mediating role of body dissatisfaction in the relationship between weight-related teasing and general self-efficacy. Furthermore, the significant direct relationship between weight-related teasing and general self-efficacy in one sample and not the other may suggest that only within

certain cultural settings weight-based teasing may result in a decline in an individual's confidence in their own capabilities.

Overall, the sub-hypotheses 1a, 2a, 2c, 2d, 2e, 3a, 3b, 7c, and 7f were confirmed in the Spanish sample and the sub-hypotheses 2d, 3a, 3b, and 7f were supported in the Iranian sample. In other words, in the Spanish sample, the disconnection/rejection schema domain significantly mediated the relationship between paternal parenting style and eating concern, significantly mediated the effect of childhood abuse on restraint and eating concern (symptoms of anorexia nervosa), significantly mediated the relationship between childhood abuse and body dissatisfaction; the disconnection/rejection schema domain and body dissatisfaction significantly and sequentially mediated the impact of childhood abuse on restraint and eating concern (symptoms of anorexia nervosa); the impaired autonomy schema domain significantly mediated the relationship between paternal parenting style and general self-efficacy, while following mediations were mutually confirmed in both Spanish and Iranian samples: a) body dissatisfaction significantly mediated the relationship between schema domains and eating disorder symptoms. However, the schema domain differed in the Spanish and Iranian samples: in the Spanish sample, body dissatisfaction significantly mediated the effect of the disconnection/rejection, impaired limits, and exaggerated goals schema domains on symptoms of anorexia and bulimia nervosa (restraint, eating concern, binge-eating episodes, and compensatory behaviors), whereas in the Iranian sample, body dissatisfaction significantly mediated the relationship between impaired autonomy and performance schema domain and eating disorder symptoms (restraint, eating concern, binge-eating episodes, and compensatory behaviors; b) body dissatisfaction significantly mediated the effect of weight-related teasing and peer and media pressure on eating disorder symptoms (restraint, eating

concern, and bulimia nervosa); and c) the impaired autonomy schema domain significantly mediated the impact of childhood abuse on general self-efficacy. In the Spanish model, however, in addition to impaired autonomy schema domain, exaggerated goals schema domain also significantly mediated the relationship between childhood abuse and general self-efficacy. Now, we will address the third and final objective of this study:

The third general objective of this study was to assess whether the relationships within the proposed model are culture-bound and, thus, answer the following question: “Does culture moderate common mediations between the Spanish and Iranian models?”. To this end, following the method employed in a previously published study (Salami et al., 2019), the culture of each country was considered the moderator for mutually confirmed mediations (hypotheses 2d, 3a, 3b, and 7f). Results of the moderated mediation analysis showed that in none of the Spanish or Iranian models, culture did not significantly moderate any mediation. In other words, the mutually supported mediations were not dependent neither on the collectivism (horizontal) nor the individualism (horizontal). Therefore, regardless of the cultural context, body dissatisfaction mediates the effects of early maladaptive schema domains, weight-related teasing, and sociocultural attitudes towards appearance (especially peer and media pressure) on symptoms of anorexia and bulimia nervosa, and impaired autonomy schema domain mediates the impact of childhood abuse on general self-efficacy. This outcome, along with almost similar variances explained by two models, is in line with the findings of two recent meta-analyses, that have reported that there is no significant difference in screen-based disordered eating prevalence among western and non-western countries (Alhaj et al., 2022b; Ghazzawi et al., 2023).

Due to no observed significant moderated mediation, the moderating effect of horizontal individualism and horizontal collectivism was examined in the common significant direct

relationships among the Spanish and Iranian models. Yielded results indicated that the horizontal individualism weakens the relationship between childhood abuse and the impaired autonomy and performance schema domain at a medium level. Additionally, the slope analysis revealed that in low levels of horizontal individualism, the impact of childhood abuse on impaired autonomy and performance schema domain is much stronger compared to high levels of horizontal individualism. Horizontal individualism is a cultural context in which personal goals and being unique are encouraged without necessarily emphasizing the superiority (Triandis, 2001). Therefore, in such an atmosphere with the dominant cultural emphasis on individuality, which does not prohibit individuals' autonomy, it appears that the impact of early trauma (such as emotional, physical, or sexual abuse) on the development of early maladaptive schemas, particularly those associated with unfulfilled desire for autonomy and independence, is diminished.

In terms of the models' exploratory power and effect size analyses, yielded results suggest that almost similar amount of variance in eating disorder symptoms and academic achievement were explained by the Spanish and Iranian models. Furthermore, mentioned results indicated the appropriate selection of antecedents regarding restraint and eating concern, as well as the inappropriate conceptualization of risk factors for academic achievement, in both models.

In the Spanish model, weight-related teasing and sociocultural attitudes towards appearance had the most important roles in the prediction of body dissatisfaction. Body dissatisfaction, itself, had the highest impact on anorexia nervosa symptoms, namely restraint and eating concern, as well as bulimia nervosa. In fact, the only variable with a measurable effect on the symptoms of bulimia nervosa was body dissatisfaction, although this effect was a moderate one. On the other hand, the impaired autonomy schema domain showed the highest effect on the prediction of

general self-efficacy, and the impaired limits schema domain indicated the most important influence on academic achievement.

In the Iranian sample, sociocultural attitudes towards appearance had the highest effect on body dissatisfaction prediction. Body dissatisfaction had the highest influence on anorexia nervosa symptoms, namely restraint and eating concern, as well as bulimia nervosa. Furthermore, the impaired autonomy schema domain showed the highest influence in predicting general self-efficacy, and childhood abuse was the most effective variable on academic achievement.

Overall, in both the Spanish and Iranian models, sociocultural attitudes towards appearance had the most important impact on body dissatisfaction, body dissatisfaction itself showed the highest influence on the development of anorexia and bulimia nervosa symptoms, and the impaired autonomy and performance schema domain was the most effective variable in predicting general self-efficacy.

5.6 Theoretical and Practical Implications

The findings of this study have several theoretical and practical implications. Theoretically, our findings hugely contribute to the literature on the existing models for the etiology of disordered eating by considering most of the prominent and previously established risk factors for the development of eating disorder symptoms in a comprehensive model which was assessed among two samples of undergraduate university students with diverse cultural values. Moreover, emphasizing subsequent problems in the academic performance of undergraduates with symptoms of eating disorders, we highlighted complex relationships between mutual risk factors for the development of eating disorder symptoms and poor academic achievement. Accordingly, thirty-two mediations were proposed, of which twenty-six were examined for the first time, despite the

existence of pertinent fundamental literature. As a result, numerous research gaps concerning the risk factors for eating disorder symptoms were identified, leaving ample opportunity for additional studies in this area. Furthermore, reported results, for the first time, shed light on the contribution of a) early maladaptive schemas and body dissatisfaction (sequentially) in the relationship between childhood abuse and eating disorder symptoms; b) disconnection schema domain in the relationship between childhood abuse and body dissatisfaction; and c) impaired autonomy schema domain in the effect of parenting style and childhood abuse on general self-efficacy. In addition, the findings of this study complement those of earlier research regarding the mediating role of a) disconnection schema domain in the impact of parenting styles and childhood abuse on eating disorder symptoms; b) body dissatisfaction in the effect of early maladaptive schemas on the development of eating disorder symptoms; and c) body dissatisfaction in the influence of weight-related teasing and peer and media pressures on the emergence of eating disorder symptoms. We particularly noticed that different cultural values do not influence these mentioned mediations; Thus, they do not appear to be culture-bound. Additionally, in both Spanish and Iranian models, weight-related teasing and peer and media pressures to be thin were the most important variables in averagely explaining the variance for body dissatisfaction; body dissatisfaction and weight-related teasing were major factors in moderately explaining the variance for restraint; and weight-related teasing and body dissatisfaction were prominent antecedents in strongly explaining the variance for eating concern. This implies the significance of the mentioned predictors, regardless of the culture.

Practically, the results of this study can be implemented in media, and clinical and educational environments to aid in the prevention, early detection, and treatment of eating disorder symptoms, especially in undergraduate students. To this end, in light of this research's findings, which

indicated that early maladaptive schemas significantly mediate the effect of childhood abuse and parenting styles on the onset of eating disorder symptoms, educational psychologists, schools, and the media have an opportunity to educate parents regarding their pivotal responsibility and thereby prevent the development of eating disorder symptoms.

Universities, on the other hand, could employ the results of this study to design educational seminars and workshops, targeting undergraduate students in particular, with the intention of increasing their awareness about being in a high-risk group for eating disorders. Such attempts should underscore the crucial importance of seeking assistance, consulting specialists, and initiating treatment. In the clinical context, the outcomes of this study can be applied by clinicians and psychotherapists, specifically those who employ the schema therapy approach, to assess, diagnose, and treat developed early maladaptive schemas in patients with eating disorders, or refer them to schema therapists, in order to target the symptoms of eating disorders via schema therapy. Moreover, in the procedure of diagnosis, identifying the existing early maladaptive schemas, especially those in the impaired autonomy and performance domain, will be helpful in planning for the improvement of patients' general self-efficacy. Furthermore, in the diagnosis and treatment of body dissatisfaction as a symptom of disordered eating and also as one of the most prominent risk factors for the development of both anorexia and bulimia nervosa, clinicians may pay more attention to the perceived pressures from media and peers.

5.7 Limitations

Despite the strengths mentioned, this study has certain limitations that need to be noted:

1. In both the Spanish and Iranian populations, the sampling method was non-random and convenient; Hence, the yielded results should be generalized with caution.

2. As this study was conducted by a student, the sample size calculation used a medium effect size (.3) instead of a small one (.1); Additionally, the study power was set on .8, rather than a higher value.
3. In both the Spanish and Iranian samples, there was an imbalanced distribution of participants' gender, with a greater proportion of female subjects compared to male individuals.
4. The SmartPLS software employed for data analysis mainly emphasizes exploration and prediction rather than providing definitive confirmation or rejection of hypothesized relationships.
5. Due to the wide range of variables in the proposed model, the research survey whether completed online or in person, was long enough, potentially resulting in participants' fatigue.
6. This study focused on the symptoms associated with prevalent eating disorders, namely, anorexia nervosa, bulimia nervosa, and binge-eating disorder, while other types of eating disorders remained uninvestigated.
7. In both Spanish and Iranian models, the variance explained for academic achievement was weak, implying an inadequate selection of independent variables as its risk factors.

5.8 Suggestions for Future Research

This research has uncovered many potential directions in need of further investigation. Therefore, based on the mediations being examined for the first time in this study and the limitations mentioned, several suggestions are presented for future investigations:

1. Future researchers are encouraged to improve on our model by incorporating symptoms of additional eating disorders, optimizing the composition of independent and mediating variables, particularly in relation to academic achievement, and evaluating the model using a randomly selected sample of undergraduate university students.
2. Employing the small effect size (.1) and greater power in calculating the sample size, it is recommended to examine an improved version of our model in a larger sample with an equal number of male and female participants.
3. Further research is needed to assess and compare the proposed model between a clinical sample of individuals with diagnosed eating disorders and a non-clinical one.
4. Considering the novelty of this study in addressing certain mediations, it is recommended that further research be undertaken in the following areas:
 - The serial mediation effect of early maladaptive schemas and body dissatisfaction in the relationship between parenting style and eating disorder symptoms,
 - The mediating role of early maladaptive schemas in the effect of parenting style on body dissatisfaction,
 - The mediating role of body dissatisfaction in the effect of childhood abuse on eating disorder symptoms,
 - The sequential mediating effect of early maladaptive schemas and body dissatisfaction in the relationship between childhood abuse and eating disorder symptoms,
 - The mediating role of early maladaptive schemas in the relationship between childhood abuse and body dissatisfaction,
 - The sequential mediating effect of early maladaptive schemas, body dissatisfaction, and eating disorder symptoms in the relationship between parenting style and academic achievement,
 - The mediating role of early maladaptive schemas in the effect of parenting style on academic achievement,

- The mediating role of early maladaptive schemas in the relationship between parenting style and academic achievement,
- The serial mediation of body dissatisfaction and eating disorder symptoms in the relationship between parenting style and academic achievement,
- The sequential mediating effect of early maladaptive schemas, body dissatisfaction, and eating disorder symptoms in the relationship between childhood abuse and academic achievement,
- The mediating role of early maladaptive schemas in the relationship between childhood abuse and academic achievement,
- The mediating role of eating disorder symptoms in the effect of childhood abuse on academic achievement,
- The sequential mediation of body dissatisfaction and eating disorder symptoms in the relationship between childhood abuse and academic achievement,
- The sequential mediation of body dissatisfaction and eating disorder symptoms in the relationship between weight-related teasing and academic achievement,
- The mediating role of eating disorder symptoms in the relationship between weight-related teasing and academic achievement,
- The sequential effect of early maladaptive schemas and general self-efficacy in the relationship between parenting style and academic achievement,
- The mediating role of general self-efficacy in the relationship between parenting style and academic achievement,
- The mediating role of early maladaptive schemas in the relationship between parenting style and general self-efficacy,
- The sequential mediation effect of early maladaptive schemas and general self-efficacy in the relationship between childhood abuse and academic achievement,
- The mediating role of general self-efficacy in the relationship between childhood abuse and academic achievement,
- The mediating role of early maladaptive schemas in the relationship between childhood abuse and general self-efficacy,
- The serial mediation effect of body dissatisfaction and general self-efficacy in the relationship between childhood abuse and academic achievement,

- The mediating role of body dissatisfaction in the effect of childhood abuse on general self-efficacy,
- The sequential mediation of body dissatisfaction and general self-efficacy in the relationship between weight related teasing and academic achievement,
- The mediating role of general self-efficacy in the relationship between weight-related teasing and academic achievement,
- The mediating role of body dissatisfaction in the effect of weight-related teasing on general self-efficacy.

This study, including all the hypothesized relationships, is among pioneering attempts at exploring new dimensions of the etiology of eating disorders, which has offered some novel insight into potential mechanisms by which certain risk factors may lead to the onset of eating disorder symptoms. Accordingly, many fruitful research areas were thrown up that require further investigation, especially for future researchers who are interested in exploring the influence of early maladaptive schemas on the development of eating disorders.

Chapter 6: General Summary, Discussion, and Conclusion

According to research, the prevalence rate of eating disorders has consistently increased all around the world over a nearly three-decade period, from 1990 to 2017 (Wu et al., 2020), highlighting the vital importance of both prevention and early detection of these disorders, which are one of the most complicated and controversial ones, both in nature and treatment (Smolak & Levine, 2015b).

To deepen our comprehension of eating disorders' origins, expand on the literature regarding their etiology models, and establish a strong basis for proposing effective strategies of prevention, diagnosis, and targeted psychotherapy, we proposed to develop a novel and multifaceted etiology model for eating disorder symptoms. This model drew upon twenty-two existing etiology models¹⁰ for eating disorder symptoms as well as findings of previously published systematic reviews (Barakat et al., 2023; Dakanalis et al., 2017; Pennesi & Wade, 2016e; Solmi et al., 2021), which have identified a) parenting styles, b) traumas such as abuses during childhood, c) being teased due to high body weight, d) sociocultural attitudes towards appearance, particularly perceived pressures from media and peers, e) early maladaptive schemas, f) body dissatisfaction, and g) low levels of self-efficacy as frequently reported risk factors associated with the onset of the most common eating disorders, namely, anorexia nervosa, bulimia nervosa, and binge-eating disorder.

However, in the process of formulating our inclusive model, we encountered research findings recognizing undergraduate university students as being among the most vulnerable groups for developing symptoms of eating disorders (Daly & Costigan, 2022; Harris et al., 2023; Kang et al., 2021b; Pengpid & Peltzer, 2018; Torres et al., 2017b), which are unfortunately associated with

¹⁰ (Benas & Gibb, 2008a; Blodgett Salafia & Gondoli, 2011; Cella et al., 2020; Fortes et al., 2015; Gonçalves et al., 2020; Hayek et al., 2022; Jenkins et al., 2013; Jones et al., 2006; Kimball et al., 2019b; Lam et al., 2009; Llorca et al., 2017; Masud et al., 2016b; Meneguzzo et al., 2021; O'Loughlen et al., 2023; Preti et al., 2006; Reina et al., 2013; Scheiber et al., 2023; Turner et al., 2005b; Waller et al., 2001; Williams & Gleaves, 2003b; Wonderlich et al., 2001; Zimmer-Gembeck et al., 2021)

diminished academic grades (Adelantado-Renau et al., 2018). Thus, undergraduate university students were defined as our target population. Then, upon reviewing published articles on the risk factors of poor academic achievement, we noticed that certain risk factors associated with eating disorders also function as predictors of inadequate academic performance. Hence, the issues of undergraduate university students being a high-risk group for eating disorders, the connection between eating disorder symptoms and subsequent poor academic achievement, and the noticed shared risk factors between disordered eating and low academic grades underscored the necessity of conducting a literature review to serve as the theoretical framework for our intricate model, which was being developed. Consequently, as the first study of the current dissertation, a narrative review was carried out, in which four databases were explored employing key search terms.

Our next step in this dissertation was to evaluate the proposed model in a sample of undergraduate university students. However, investigating the necessary instruments for assessing different variables of the model, we noticed that the Spanish version of the Parental Bonding Instrument (PBI), which is one of the most widely utilized measures for evaluating the quality of the parent-child relationship, which itself has been recognized as one of the most important risk factors for the emergence of eating disorder symptoms (Pennesi & Wade, 2016f), has been validated in 1993, that is more than thirty years ago, in a sample of young postpartum patients (Gómez-Beneyto et al., 1993). Hence, considering the effect of societies' global alterations on parents' rearing behaviors (Bianchi, 2016; García et al., 2018; Park et al., 2014; Zhou et al., 2018), and the unrepresentative nature of the considered sample in the earlier validation of this tool in Spain, as the second study of the present dissertation, we proposed to translate and assess the psychometric properties of the PBI once again, using a new sample of Spanish university students.

In terms of the third and main study of this dissertation, we needed to use the updated Spanish PBI along with other instruments to collect data for evaluating the proposed model. However, investigating recently published papers examining etiological models for eating disorders showed that due to prior findings suggesting that eating disorders are culture-bound (Jaeger et al., 2002; Keel & Klump, 2003; Qian et al., 2022; Salami et al., 2019; Swartz, 1985; Tomiyama & Mann, 2008), cultural differences have attracted researchers' attention in this regard (Kimball et al., 2019b). Thus, to investigate our proposed model from a cultural perspective and conduct a cross-cultural study, two samples of undergraduate university students from a Western and non-Western country were employed. Accordingly, eight measures were administered to two samples of undergraduate university students from Spain and Iran. One of these measures was an individualism-collectivism scale to assess the dominant cultural values in each country. Afterwards, employing the PLS-SEM method, hypothesized mediations within two models were examined. Subsequently, considering mutually significant mediations between the Spanish and Iranian samples, and given that in our study the dominant cultural values were found to be horizontal collectivism in Spain and horizontal individualism in Iran, the moderating role of culture was studied in each indirect effect to see if these relationships are dependent on the culture of that society.

6.1 General Discussion

The first study of this dissertation (the narrative review) was carried out with the main objective of providing the theoretical foundation of a novel etiological model for eating disorder symptoms as well as three specific objectives: 1) synthesizing the findings of previously conducted studies on the association between eating disorder symptoms and poor academic achievement; 2)

identifying existing academic literature on the shared risk factors that contribute to the development of both eating disorder symptoms and poor academic achievement; and 3) investigating scientific evidence for the existence of significant interconnections between those mutual risk factors.

Regarding the first objective, reviewing identified studies revealed significant associations between symptoms of anorexia nervosa, bulimia nervosa, or binge-eating disorder and poor academic performance among adolescents and young adults (Adelantado-Renau et al., 2018; Filipova & Stoffel, 2016; Serra et al., 2020b; Yanover & Thompson, 2008a). In accordance with the second aim of the narrative review and considering prominent risk factors for the development of eating disorder symptoms, we looked for articles addressing the connection between those risk factors and poor academic performance. Detected papers indicated significant relationship of parenting styles (Kenney et al., 2015; Stavroulaki et al., 2021b; Turner et al., 2009), childhood abuses (Moore et al., 2020; Pelcovitz et al., 2017; Porche et al., 2011; Slade & Wissow, 2007; Tognin et al., 2023), weight-related teasing (Guardabassi et al., 2018; Gunnarsdottir et al., 2012; Krukowski et al., 2009; Lessard et al., 2020, 2021; Lydecker et al., 2023), early maladaptive schemas (Ahami et al., 2017; Azhari, 2017; Cecero et al., 2008; Chen et al., 2023), and general self-efficacy (Chang & Tsai, 2022; Li, et al., 2022; Sucuoğlu, 2018; Yuan et al., 2016) with academic achievement. Therefore, mentioned relationships were added to the model and academic achievement variable was included in our evolving model to be examined both as an outcome of disordered eating and a dependent variable being predicted by many of the risk factors of eating disorders.

Lastly, in line with the third goal of the narrative review and to elaborate on the model as much as possible, we focused on the interrelationships between the risk factors. Reviewing previously

published studies showed that parenting style is associated with early maladaptive schemas (Maçik, 2021; Salari et al., 2022b; Saritas-Atalar & Altan-Atalay, 2020), body dissatisfaction (Chen et al., 2020; Grenon et al., 2016; Pellerone et al., 2017), and general self-efficacy (Guo et al., 2023; Huang et al., 2022); childhood abuse is related to early maladaptive schemas (Feyzioglu et al., 2022; Mojallal et al., 2021b; Shojaati et al., 2021), body dissatisfaction (Kremer et al., 2013; Talmon & Ginzburg, 2018; Treuer et al., 2005), and general self-efficacy (Cohrdes & Mauz, 2020; Haj-Yahia et al., 2021; See Mey et al., 2022); weight-related teasing is correlated with body dissatisfaction (Chen et al., 2022; Gonzaga et al., 2021; Rodgers et al., 2021) and general self-efficacy (Greenleaf et al., 2014; Ievers-Landis et al., 2019); early maladaptive schemas are related to body dissatisfaction (Kimball et al., 2019b; Krug et al., 2021; Moghadam et al., 2021c) and general self-efficacy (Hosseinzadeh et al., 2021a; Miklósi et al., 2017); and body dissatisfaction itself is related to general self-efficacy (Ouyang et al., 2020; Wang et al., 2023). Hence, our model was almost completed by connecting parenting styles, childhood abuses, weight-related teasing, early maladaptive schemas, body dissatisfaction, and general self-efficacy to each other. At this point, the narrative review was completed, providing a solid literature base for our detailed etiological model for eating disorder symptoms and poor academic achievement. This narrative review was the first attempt to address a) the relationship between eating disorder symptoms and poor academic achievement, b) shared risk factors for the development of both eating disorder symptoms and poor academic achievement, and c) interrelationships between those mutual risk factors. No previous study has investigated the aforementioned associations and issues neither separately nor together.

Notably, as mentioned before, sociocultural attitudes towards appearance (especially peers and media pressures to be thin) are also one of the documented risk factors for the development of eating

disorder symptoms (Pennesi & Wade, 2016), and are associated with body dissatisfaction (Ahmadpanah et al., 2019; Eshak et al., 2020; Lewis-Smith et al., 2020), which itself is the most prominent risk factor for EDs (Pennesi & Wade, 2016). Therefore, peers and media pressures to be thin were also added to the formulated model in the narrative review and the final model was developed.

The second study (Spanish PBI validation) of the current dissertation aimed to update the Spanish version of the PBI and assess its factorial structure after over thirty years of its previous validation in Spain. Therefore, the original English PBI was translated to Spanish (with its author permission) and completed by a sample of male and female university students aged between 17 and 35. Then, confirmatory factor analysis was conducted on this new dataset, adopting previously proposed two-, three-, and four-factor models of PBI. The results showed that out of fourteen available models, the Spanish students' data better fits Uji et al.'s four-factor model of care, overprotection, autonomy, and indifference (Uji et al., 2006) compared to the previously yielded three-factor model of affect, overprotection, and restraint in Spain. Furthermore, the test-retest reliability and concurrent validity of this new Spanish version were confirmed. The findings of this study were consistent with previous PBI validation investigations conducted in other cultures, both in terms of high internal consistency (Behzadi & Parker, 2015b; Gómez-Beneyto et al., 1993; Huang et al., 2020b; Kapçi & Küçükler, 2006; Karim & Begum, 2017; Mohr et al., 1999; Murphy et al., 1997; Qadir et al., 2005) and the yielded four-factor structure (Behzadi & Parker, 2015b; Huang et al., 2020b; Liu et al., 2011b; Suzuki & Kitamura, 2011; Uji et al., 2006). Moreover, the inclusion of an extra dimension in a parenting strategies instrument is consistent with previous studies, which have demonstrated the evolution of parenting behaviors in response to societal changes (Bianchi, 2016; García et al., 2018; Park et al., 2014; Zhou et al., 2018).

In the present dissertation, the third study mainly aimed to assess the formulated model in the first study, as well as examining the potential moderating effect of culture on the commonly confirmed mediations between two samples of Spanish and Iranian undergraduate university students. Our findings in the Spanish sample showed that the disconnection/rejection schema domain fully mediated the relationship between fathers' parenting style and eating concern. To be exact, the paternal parenting style did not have a direct impact on eating concern development, but the disconnection/rejection schema domain passed all the influence through itself. This result was also reported by Jones et al. (2006) and Turner et al. (2005a), who showed that the relationship between father's parenting style and symptoms of disordered eating is mediated by early maladaptive schemas within the disconnection/rejection domain; a domain which, according to the theory of schema therapy, is involved with an unmet need of secure attachment (Young et al., 2003). Furthermore, our finding was in agreement with earlier observations (Brown et al., 2016b; Khosravi et al., 2023), which indicated that negative paternal parenting strategies have an indirect impact on the development of eating disorder symptoms. Overall, this study along with existing literature, emphasized the importance of fathers' involvement in the development of eating disorder symptoms.

Moreover, in the Spanish sample, the disconnection/rejection schema domain fully mediated the effect of childhood abuse on restraint and eating concern. In other words, the disconnection/rejection domain passed all the effect of childhood abuse on symptoms of anorexia nervosa through itself, and child abuse did not directly influence the development of anorexia nervosa. This result was in line with those obtained by prior researchers (Jenkins et al., 2013; Meneguzzo et al., 2021; Waller et al., 2001), who have also reported that schemas in the disconnection/rejection domain mediate the relationship between childhood traumas such as

emotional and sexual abuse, and symptoms of eating disorder. In addition, this finding corroborated the findings of a great deal of previous works in terms of the indirect effect of childhood abuse on eating disorder symptoms (Bou Khalil et al., 2020; Dworkin et al., 2014; Hund & Espelage, 2005; Mazzeo & Espelage, 2002; Vartanian et al., 2018).

In the Spanish sample, we also found that the disconnection/rejection schema domain fully mediated the impact of childhood abuse on body dissatisfaction. In other words, childhood abuse did not have a direct effect on the development of body dissatisfaction and all the influence from childhood abuse to body dissatisfaction was transferred by disconnection/rejection schema domain. Although this study is the first to investigate the mediating role of schema domains in the relationship between childhood abuse and body dissatisfaction, our result was consistent with those of previous researchers (Bödicker et al., 2022a; Dunkley et al., 2010; Williams & Gleaves, 2003b), who also did not observe a significant direct relationship between childhood abuse and body dissatisfaction.

In addition, in the Spanish sample, the disconnection/rejection schema domain and body dissatisfaction sequentially and fully mediated the influence of childhood abuse on symptoms of anorexia nervosa. To be exact, childhood abuse did not have a significant direct effect on restraint and eating concern, but the entire influence was passed by the double mediation of disconnection/rejection schema domain and body dissatisfaction. Although this study is the first to examine this sequential mediation, our finding regarding the indirect effect of childhood abuse on eating disorder symptoms was in agreement with those obtained in previous studies (Bou Khalil et al., 2020; Dworkin et al., 2014; Hund & Espelage, 2005; Mazzeo & Espelage, 2002; Vartanian et al., 2018). This result, further emphasized the critical role of the disconnection/rejection schema domain in the development of eating disorder symptoms, including body dissatisfaction.

Lastly, in the Spanish sample, the impaired autonomy schema domain fully mediated the relationship between paternal parenting style and general self-efficacy. In other words, schemas involved in an individuals' need for independence and autonomy passed all the impact of fathers' parenting behaviors on the general self-efficacy. In accordance with the present results, previous studies have demonstrated that there is no significant direct relationship between negative parenting style and children's general self-efficacy (Chen et al., 2020; Lim & Leng Loo, 2003). However, this outcome does not support the previous research (Guo et al., 2023; Huang et al., 2022; Siqueira-Campos et al., 2021b), reporting significant relationship between parenting style and general self-efficacy. Notably, although previous research has indicated that parenting style affects the development of early maladaptive schemas (Maçık, 2021; Salari et al., 2022a; Saritas-Atalar & Altan-Atalay, 2020; Shute et al., 2019), and early maladaptive schemas influence the development of general self-efficacy (Hosseinzadeh et al., 2021b; Miklósi et al., 2017), our study was the first to address the mediation of early maladaptive schemas in the link between parenting style and general self-efficacy.

Additionally, in both Spanish and Iranian samples, body dissatisfaction mediated the effect of schema domains (disconnection/rejection, impaired limits, and exaggerated goals domain in the Spanish sample and impaired autonomy and performance domain in the Iranian sample) on restraint, eating concern, and bulimia nervosa. This result supports evidence from an earlier observation that the relationship between disconnection/rejection domain (namely abandonment/instability, mistrust/abuse, social isolation, and defectiveness/shame schemas) and eating disorder symptoms (food restriction and binging-purging) was mediated by body dissatisfaction (Kimball et al., 2019b). In addition, our finding was in agreement with previous researchers (De Paoli et al., 2017; Gerges et al., 2022; Legenbauer et al., 2018), who have also

reported a significant indirect impact of schemas in the disconnection/rejection and impaired limits domains on symptoms of eating disorders.

Furthermore, in both our Spanish and Iranian models, body dissatisfaction mediated the impact of weight-related teasing on restraint, eating concern, and bulimia nervosa. However, this mediating effect was revealed to be partial regarding some eating disorder symptoms and full in terms of others. To be exact, in both samples, body dissatisfaction partially mediated the relationship between weight-related teasing and symptoms of anorexia nervosa, suggesting that weight-related teasing, regardless of cultural background, can also directly influence the development of restraint and eating concern. Nevertheless, body dissatisfaction was, respectively, a partial and a full mediator in the relationship between weight-related teasing and symptoms of bulimia nervosa in the Iranian and Spanish samples. The variation in the mode of mediation can be explained by the fact that within certain cultural contexts, weight-related teasing does not appear to have a direct influence on the emergence of compensatory or bingeing behaviors; rather, the body dissatisfaction that occurs from such teasing contributes to the emergence of eating disorders.

The yielded result in terms of partial mediation of body dissatisfaction in the link between weight-related teasing and symptoms of bulimia nervosa (in the Iranian sample) reflected that of Benas and Gib (2008), who also found that body dissatisfaction partially mediates the effect of weight-related teasing on symptoms of binge eating and bulimia nervosa. Nonetheless, this outcome did not support the previous research (Zimmer-Gembeck et al., 2021) showing that peer and family teasing does not have a significant indirect effect on symptoms of disordered eating.

On the other hand, in both Spanish and Iranian samples, body dissatisfaction fully mediated the influence of peer and media pressure on restraint, eating concern, and bulimia nervosa. One possible explanation for this observed full mediation in both models may be that, regardless of the

culture, the impact of perceived pressures from media and peers (for being thin) on the emergence of eating disorder symptoms is not direct, but rather transmitted through the experience of body dissatisfaction. This result was in line with those of previous studies (Blodgett Salafia & Gondoli, 2011; Fortes et al., 2015; Reina et al., 2013), in which a significant indirect effect of peer and media pressure on the development of disordered eating has been observed. Nevertheless, our finding was in contrast with those of prior researchers (Lam et al., 2009; Scheiber et al., 2023), who have reported a non-significant mediation effect of body dissatisfaction in the relationship between peer and media pressures and symptoms of eating disorders.

In addition, among both Spanish and Iranian students, the impaired autonomy schema domain mediated the impact of childhood abuse on general self-efficacy. This finding may indicate that, regardless of the culture, childhood abuse influences the development of maladaptive schemas related to the unmet needs for autonomy, competence, sense of identity, and independence. These schemas, in turn, lead to low general self-efficacy. Notably, in spite of the existence of previous studies indicating that childhood abuse contributes to the development of early maladaptive schemas (Boyda et al., 2018; Estévez et al., 2016, 2019; Feyzioğlu et al., 2022; Mojallal et al., 2021b; Shojaati et al., 2021) and early maladaptive schemas subsequently influence general self-efficacy (Hosseinzadeh et al., 2021b; Miklósi et al., 2017), our study was the first to address the mediating role of early maladaptive schemas in the link between childhood abuse and general self-efficacy.

Regarding the other objective of the third study, which was exploring the moderating role of culture on the mutually confirmed indirect effects between two samples, results indicated that none of the common mediations were moderated by that society's culture. This finding may highlight the global function of certain effect mechanisms regardless of cultural values; to be exact, it may

be concluded that regardless of the cultural background, body dissatisfaction mediates the effects of early maladaptive schema domains, weight-related teasing, and peer and media pressures on symptoms of anorexia and bulimia nervosa, and impaired autonomy schema domain mediates the impact of childhood abuse on general self-efficacy. Moreover, our results showed that both Spanish and Iranian etiology models for eating disorder symptoms explain almost similar variances, once again implying that these models may not be culture-bound. This outcome was interestingly in line with those of recent studies (Alhaj et al., 2022c; Ghazzawi et al., 2023) indicating that there is no statistically significant difference between non-Western and Western nations in the prevalence of eating disorder symptoms.

Considering the moderating effect of culture on mutually significant direct effects between two samples, it was observed that the horizontal individualism moderately weakens the relationship between childhood abuse and the impaired autonomy and performance schema domain. Moreover, the influence of childhood abuse on the development of impaired autonomy and performance schema domain was much stronger at low levels of horizontal individualism in comparison to its high levels. In a society with dominant values of horizontal individualism, which promotes individuality and personal goals (Triandis, 2001), a possible explanation for this finding is that when individuals' autonomy is encouraged, the influence of early abuse on the formation of early maladaptive schemas related to an unmet need for autonomy and independence is reduced.

Finally, in both the Spanish and Iranian models, it was found that sociocultural attitudes towards appearance play a significant role in influencing body dissatisfaction. Furthermore, body dissatisfaction was found to have the greatest impact on the development of symptoms related to anorexia and bulimia nervosa. Additionally, the schema domain of impaired autonomy and performance was identified as the most influential variable in predicting general self-efficacy.

6.2 Strengths and Limitations

The present dissertation, in which the first and second studies serve as essential components of the third and main one, has important strengths that should be highlighted. In the first study, the major contribution of the narrative review was the development of a multidimensional etiological model for eating disorder symptoms and poor academic achievement. Moreover, synthesizing scientific evidence on the correlation between eating disorder symptoms and poor academic outcomes emphasized the importance of addressing the academic performance of non-clinical individuals with eating disorder symptoms.

The primary significance of the second study, a new validation of the Spanish Parental Bonding Instrument, was that future Spanish researchers in need of a measure to evaluate the quality of parent-child relationship, now have access to a reliable, valid, and updated four-factor version of the widely known PBI. Additionally, this study detected a fourth dimension for parenting strategies within the same society, highlighting the importance of Spanish parents becoming aware of the shift in the underlying characteristics of their everyday child-rearing practices in comparison to earlier generations.

The key strength of the third study was that several shortcomings of previous research regarding the effect mechanisms of eating disorder risk factors on the onset of eating disorder symptoms were addressed by proposing a detailed model, which included thirty-two mediations, 26 of which were being addressed for the first time in this study, despite the presence of related literature. As a result, major opportunities for further investigations were identified. Moreover, our results in the third study of this dissertation for the first time showed that early maladaptive schemas and body dissatisfaction sequentially mediate the relationship between childhood abuse and eating disorder symptoms; the disconnection schema domain mediates the relationship between childhood abuse

and body dissatisfaction; and the impaired autonomy schema domain mediates the effect of parenting style and childhood abuse on general self-efficacy. Consequently, our hypothesized model can hugely contribute to the literature on the existing models for the etiology of disordered eating. Furthermore, it is worth noting that by evaluating our model among two samples with different cultural backgrounds, cross-cultural research was conducted, revealing that the effect mechanisms of eating disorders' risk factors are not dependent on the culture.

Despite the abovementioned strengths, it is important to acknowledge that there are certain limitations in this dissertation that warrant attention. To begin, the review conducted in the first study was non-systematic, and the number of searched databases was limited. This may have led to the omission of a certain number of published and unpublished studies. Moreover, in the second study, participation in the validation of the Spanish PBI was not possible for individuals having only one parent, as the completion of both maternal and paternal forms was mandatory. Furthermore, in terms of the third study, the non-random sampling reduces the generalizability of the results. In addition, the variance for academic achievement was insufficiently explained in both the Spanish and Iranian models, indicating that, in spite of the scientific literature, the considered risk factors for poor academic achievement were not appropriate independent variables in the hypothesized model. Lastly, it is worth noting that the variance-based software employed to conduct the third study's statistical analyses, SmartPLS, primarily serves for the purpose of exploration and prediction rather than definitively confirming or rejecting hypothesized relationships.

6.3 Implications for Future Research and Practice

Considering the strengths and limitations of the present dissertation, future researchers are encouraged to a) examine the effect of anorexia nervosa symptoms, weight-related teasing victimization, and early maladaptive schemas on academic achievement especially among young adults; b) study the impact of weight-related teasing, early maladaptive schemas, and body dissatisfaction on general self-efficacy; c) investigate the influence of childhood physical abuse on the development of early maladaptive schemas; and d) conduct a comprehensive systematic review and meta-analysis study, including three separate meta-analyses for each particular objective of our narrative review or a distinct systematic review and meta-analysis for each one of the aforementioned goals. Moreover, considering the validation of PBI in the current dissertation and taking into account the cultural diversity of Spain's provinces it is recommended to evaluate the psychometric properties of the Spanish PBI among individuals from different regions of this country. Since PBI validation was conducted as a part of this dissertation and its target population was Spanish university students aged 17 to 35, it is suggested that future studies investigating the psychometric properties of the Spanish PBI consider a wider age range in order to increase the generalizability of the results to different age groups. Furthermore, regarding the third and main study of this dissertation, further research should be carried out to investigate the 26 newly addressed relationships (mentioned in the previous chapter) more broadly and employing different samples.

The new information yielded in the second study of this dissertation regarding an additional dimension for parenting strategies can be practically employed for educational purposes in order to train parents and inform them about different aspects of their rearing behaviors and attitudes. In addition, as in the third study of this thesis, it was found that early maladaptive schemas

significantly mediate the effect of childhood abuse and parenting styles on the onset of eating disorder symptoms, media, educational institutions such as schools and universities, and professionals in the field of educational and clinical psychology can practically use this finding to effectively communicate with parents and early caregivers about well-known risk factors contributing to the development of early maladaptive schemas and eating disorder symptoms and to educate undergraduate university students about their established vulnerability to disordered eating and the importance of seeking help. Psychotherapists following the schema therapy method may also find the results of the third study relevant to their clinical practice, particularly in relation to patients exhibiting symptoms of eating disorders.

In addition to making several theoretical and practical contributions to the current literature on three different areas, it is worth noting that this dissertation as a whole highlights the potential usefulness of multidimensional research activity, particularly in the field of eating disorders.

6.4 Final Conclusion

In chapters 3 to 5 of this dissertation, three different but connected studies were presented. The first study was a narrative review of existing academic literature on the relationships and interrelationships between eating disorders, academic achievement, and their shared risk factors. This review established the scientific basis for developing a detailed new model for the etiology of eating disorder symptoms. The second study involved a fresh validation of the Spanish Parental Bonding Instrument, which had been initially validated in Spain over three decades ago. This study resulted in a valid and reliable updated Spanish version of this measure to be used in the third study. In the third study of the current dissertation, we evaluated and compared the conceptualized etiological model (yielded from the first study) among two samples of Spanish and Iranian

undergraduate university students, representing two countries with previously reported horizontal and vertical collectivistic cultural contexts. Although each of the three mentioned studies included a discussion and separate sections to address the strengths and limitations, as well as implications for future research and practice, this chapter provided a synopsis of the key points addressed in all those sections.

To sum up, the most important points of this dissertation have been listed below:

- This research project is the first to incorporate several prominent eating disorder risk factors together, for developing an inclusive etiology model for eating disorder symptoms in undergraduate university students, emphasizing the influence of disordered eating on their subsequent poor academic achievement.
- Academic literature shows that restraint behaviors, eating concern, experiencing binge eating episodes, and the practice of compensatory behaviors to prevent weight gain are negatively correlated with adolescents' and university students' academic achievement.
- According to existing scientific evidence, the authoritarian parenting style, experiencing physical, emotional, and sexual abuse during childhood, weight-related teasing victimization, early maladaptive schemas, and low general self-efficacy are all risk factors for poor academic performance, while also being well-known antecedents for the development of eating disorder symptoms.
- In line with the complex nature, diagnosis, and treatment of eating disorders, a review of previous research indicates that there are complicated connections between the common risk factors for eating disorders and poor academic achievement; in other words, parenting styles and childhood abuses are associated with early maladaptive schemas; early maladaptive schemas, parenting styles, childhood abuses, weight-related teasing, and

sociocultural attitudes towards appearance are related to body dissatisfaction; and body dissatisfaction, parenting styles, childhood abuses, weight-related teasing, and early maladaptive schemas are correlated with general self-efficacy.

- After three decades, a new dimension was detected for Spanish parents' rearing behaviors, converting the old three-factor structure of affect, overprotection, and restraint for the Spanish Parental Bonding Instrument into four factors of care, overprotection, indifference, and autonomy.
- This dissertation for the first time revealed that early maladaptive schemas and body dissatisfaction sequentially mediate the relationship between childhood abuse and eating disorder symptoms; the disconnection schema domain mediates the relationship between childhood abuse and body dissatisfaction; and the impaired autonomy schema domain mediates the impacts of parenting style and childhood abuse on general self-efficacy.
- In comparison to two decades ago, cultural values in Iran have shifted towards individualism, while in Spain the collectivism is still valued.
- For the first time, the present dissertation reported that horizontal individualism negatively moderates the relationship between abuse and the development of maladaptive schemas in the impaired autonomy domain. In other words, in high levels of horizontal individualism, the effect of childhood abuse on the impaired autonomy schema domain is weakened.
- The indirect effect mechanisms of early maladaptive schemas, weight-related teasing, and peers and media pressures on anorexia and bulimia nervosa symptoms through body dissatisfaction, are not dependent on the culture and seem to have a similar global function.
- Regardless of the societies' culture, peer and media pressures have a very important effect on the development of body dissatisfaction; body dissatisfaction is the most prominent risk

factor for the onset of anorexia and bulimia nervosa symptoms; and the impaired autonomy and performance schema domain strongly influences general self-efficacy.

References

- Abar, B., Carter, K. L., & Winsler, A. (2009). The effects of maternal parenting style and religious commitment on self-regulation, academic achievement, and risk behavior among African-American parochial college students. *Journal of Adolescence*, *32*(2), 259–273.
<https://doi.org/10.1016/j.adolescence.2008.03.008>
- Abbaspour, A., Bahreini, M., Akaberian, S., & Mirzaei, K. (2021). Parental bonding styles in schizophrenia, depressive and bipolar patients: a comparative study. *BMC Psychiatry*, *21*(1), 1–8.
<https://doi.org/10.1186/s12888-021-03177-3>
- Abdel-Khalek, A. M., & Lester, D. (2017). The association between religiosity, generalized self-efficacy, mental health, and happiness in Arab college students. *Personality and Individual Differences*, *109*, 12–16. <https://doi.org/10.1016/j.paid.2016.12.010>
- Abubakar, A., Van de Vijver, F. J. R., Suryani, A. O., Handayani, P., & Pandia, W. S. (2015). Perceptions of Parenting Styles and Their Associations with Mental Health and Life Satisfaction Among Urban Indonesian Adolescents. *Journal of Child and Family Studies*, *24*(9), 2680–2692.
<https://doi.org/10.1007/s10826-014-0070-x>
- Aceijas, C., Waldhäusl, S., Lambert, N., Cassar, S., & Bello-Corassa, R. (2017). Determinants of health-related lifestyles among university students. *Perspectives in Public Health*, *137*(4), 227–236.
<https://doi.org/10.1177/1757913916666875>
- Ackard, D. M., Cronmeyer, C. L., Franzen, L. M., Richter, S. A., & Norstrom, J. (2011). Number of different purging behaviors used among women with eating disorders: Psychological, behavioral, self-efficacy and quality of life outcomes. *Eating Disorders*, *19*(2), 156–174.
<https://doi.org/10.1080/10640266.2010.511909>
- Acle, A., Cook, B. J., Siegfried, N., & Beasley, T. (2021). Cultural Considerations in the Treatment of Eating Disorders among Racial/Ethnic Minorities: A Systematic Review. *Journal of Cross-Cultural Psychology*, *52*(5), 468–488. <https://doi.org/10.1177/00220221211017664>
- Adelantado-Renau, M., Beltran-Valls, M. R., Toledo-Bonifás, M., Bou-Sospedra, C., Pastor, M. ^a C., & Moliner-Urdiales, D. (2018). The risk of eating disorders and academic performance in adolescents: DADOS study. *Nutrición Hospitalaria*, *35*(5), 1201. <https://doi.org/10.20960/nh.1778>
- Adjorlolo, S., Adu-Poku, S., Andoh-Arthur, J., Botchway, I., & Mlyakado, B. P. (2017). Demographic factors, childhood maltreatment and psychological functioning among university students' in Ghana: A retrospective study. *International Journal of Psychology*, *52*, 9–17.
<https://doi.org/10.1002/ijop.12248>

- Ahami, A., Mammad, K., Azzaoui, F.-Z., Boulbaroud, S., Rouim, F.-Z., & Rusinek, S. (2017). Early Maladaptive Schemas, Working Memory and Academic Performances of Moroccan Students. *Open Journal of Medical Psychology*, *06*(02), 53–65. <https://doi.org/10.4236/ojmp.2017.62004>
- Ahmadpanah, M., Arji, M., Arji, J., Haghighi, M., Jahangard, L., Bahmani, D. S., & Brand, S. (2019). Sociocultural attitudes towards appearance, self-esteem and symptoms of body-dysmorphic disorders among young adults. *International Journal of Environmental Research and Public Health*, *16*(21). <https://doi.org/10.3390/ijerph16214236>
- Al-Abyadh, M. H. A., & Abdel Azeem, H. A. H. (2022). Academic Achievement: Influences of University Students' Self-Management and Perceived Self-Efficacy. *Journal of Intelligence*, *10*(3), 55. <https://doi.org/10.3390/jintelligence10030055>
- Alhaj, O. A., Fekih-Romdhane, F., Sweidan, D. H., Saif, Z., Khudhair, M. F., Ghazzawi, H., Nadar, M. Sh., Alhajeri, S. S., Levine, M. P., & Jahrami, H. (2022). The prevalence and risk factors of screen-based disordered eating among university students: a global systematic review, meta-analysis, and meta-regression. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, *27*(8), 3215–3243. <https://doi.org/10.1007/s40519-022-01452-0>
- Allen, M. S., & Robson, D. A. (2020). Personality and body dissatisfaction: An updated systematic review with meta-analysis. *Body Image*, *33*, 77–89. <https://doi.org/10.1016/j.bodyim.2020.02.001>
- Almenara, C. A. (2022). 40 years of research on eating disorders in domain-specific journals: Bibliometrics, network analysis, and topic modeling. *PLOS ONE*, *17*(12), e0278981. <https://doi.org/10.1371/journal.pone.0278981>
- Al-sheyab, N. A., Gharaibeh, T., & Kheirallah, K. (2018). Relationship between Peer Pressure and Risk of Eating Disorders among Adolescents in Jordan. *Journal of Obesity*, *2018*, 1–8. <https://doi.org/10.1155/2018/7309878>
- Amani, M., Nazifi, M., & Sorkhabi, N. (2020). Parenting styles and academic achievement of early adolescent girls in Iran: mediating roles of parent involvement and self-regulated learning. *European Journal of Psychology of Education*, *35*(1), 49–72. <https://doi.org/10.1007/s10212-019-00422-y>
- American Psychiatric Association. (2013). Diagnostic and Statistical Manual of Mental Disorders, 5th Edition. In *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition*. <https://doi.org/10.1176/appi.books.9780890425596.893619>
- Arcelus, J., Mitchell, A. J., Wales, J., & Nielsen, S. (2011). Mortality rates in patients with anorexia nervosa and other eating disorders: A meta-analysis of 36 studies. *Archives of General Psychiatry*, *68*(7), 724. <https://doi.org/10.1001/archgenpsychiatry.2011.74>
- Arntz, A., & Jacob, G. (2017). *Schema Therapy in Practice: An Introductory Guide to the Schema Mode Approach*. John Wiley & Sons. <https://books.google.es/books?id=xiZEDwAAQBAJ>

- Arrindell, W. A., Akkerman, A., Bagés, N., Feldman, L., Caballo, V. E., Oei, T. P. S., Torres, B., Canalda, G., Castro, J., Montgomery, L., Davis, M., Calvo, M. G., Kenardy, J. A., Palenzuela, D. L., Richards, J. C., Leong, C. C., Simón, M. A., & Zaldívar, F. (2005). The short-EMBU in Australia, Spain, and Venezuela: Factorial invariance, and associations with sex roles, self-esteem, and eysenckian personality dimensions. *European Journal of Psychological Assessment, 21*(1), 56–66. <https://doi.org/10.1027/1015-5759.21.1.56>
- Arrindell, W. A., & Engebretsen, A. A. (2000). Convergent validity of the short-EMBU1 and the parental bonding instrument (PBI): Dutch findings. *Clinical Psychology & Psychotherapy, 7*(4), 262–266. [https://doi.org/10.1002/1099-0879\(200010\)7:4<262::AID-CPP257>3.0.CO;2-9](https://doi.org/10.1002/1099-0879(200010)7:4<262::AID-CPP257>3.0.CO;2-9)
- Arrindell, W. A., Sanavio, E., Aguilar, G., Sica, C., Hatzichristou, C., Eisemann, M., Recinos, L. A., Gaszner, P., Peter, M., Battagliese, G., Kállai, J., & van der Ende, J. (1999). The development of a short form of the EMBU 1 Swedish acronym for Egna Minnen Beträffande Uppfostran (“My memories of upbringing”): Its appraisal with students in Greece, Guatemala, Hungary and Italy. *Personality and Individual Differences, 27*(4), 613–628. [https://doi.org/10.1016/S0191-8869\(98\)00192-5](https://doi.org/10.1016/S0191-8869(98)00192-5)
- Artyukhov, A., Pritchard, M., & Brasil, K. (2022). Relationships between body image and mental health in white, cisgender college students. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity, 27*(8), 3579–3586. <https://doi.org/10.1007/s40519-022-01495-3>
- Aynehchi, A., Saleh-Ghadimi, S., & Dehghan, P. (2023). The association of self-efficacy and coping strategies with body mass index is mediated by eating behaviors and dietary intake among young females: A structural-equation modeling approach. *PLOS ONE, 18*(1), e0279364. <https://doi.org/10.1371/journal.pone.0279364>
- Azhari, M. S. (2017). Early Maladaptive Schemas and Academic Procrastination in Students: The Mediating Role of Perfectionism. *International Journal of Psychological Studies, 9*(4), 76. <https://doi.org/10.5539/ijps.v9n4p76>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2), 122–147. <https://doi.org/10.1037/0003-066X.37.2.122>
- Barakat, S., McLean, S. A., Bryant, E., Le, A., Marks, P., Aouad, P., Barakat, S., Boakes, R., Brennan, L., Bryant, E., Byrne, S., Caldwell, B., Calvert, S., Carroll, B., Castle, D., Catterson, I., Chelius, B., Chiem, L., Clarke, S., ... Maguire, S. (2023). Risk factors for eating disorders: findings from a rapid review. *Journal of Eating Disorders, 11*(1), 8. <https://doi.org/10.1186/s40337-022-00717-4>

- Bardone-Cone, A. M., Abramson, L. Y., Vohs, K. D., Heatherton, T. F., & Joiner, T. E. (2006). Predicting bulimic symptoms: An interactive model of self-efficacy, perfectionism, and perceived weight status. *Behaviour Research and Therapy*, *44*(1), 27–42. <https://doi.org/10.1016/j.brat.2004.09.009>
- Barney, J. L., Barrett, T. S., Lensegrav-Benson, T., Quakenbush, B., & Twohig, M. P. (2022). Examining a mediation model of body image-related cognitive fusion, intuitive eating, and eating disorder symptom severity in a clinical sample. *Eating and Weight Disorders*, *27*(6), 2181–2192. <https://doi.org/10.1007/s40519-021-01352-9>
- Barton, J. A. L., Salkovskis, P., & Walters, S. (2021). Investigating the diagnostic specificity of attachment and relational needs in hoarding disorder. *Journal of Obsessive-Compulsive and Related Disorders*, *30*. <https://doi.org/10.1016/j.jocrd.2021.100659>
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology*, *4*(1p2), 1–103. <https://doi.org/10.1037/h0030372>
- Behzadi, B., & Parker, G. (2015). A Persian version of the parental bonding instrument: Factor structure and psychometric properties. *Psychiatry Research*, *225*(3), 580–587. <https://doi.org/10.1016/j.psychres.2014.11.042>
- Bell, H. S., Donovan, C. L., & Ramme, R. (2016). Is athletic really ideal? An examination of the mediating role of body dissatisfaction in predicting disordered eating and compulsive exercise. *Eating Behaviors*, *21*, 24–29. <https://doi.org/10.1016/j.eatbeh.2015.12.012>
- Benas, J. S., & Gibb, B. E. (2008a). Weight-related Teasing, Dysfunctional Cognitions, and Symptoms of Depression and Eating Disturbances. *Cognitive Therapy and Research*, *32*(2), 143–160. <https://doi.org/10.1007/s10608-006-9030-0>
- Benas, J. S., Uhrlass, D. J., & Gibb, B. E. (2010). Body dissatisfaction and weight-related teasing: A model of cognitive vulnerability to depression among women. *Journal of Behavior Therapy and Experimental Psychiatry*, *41*(4), 352–356. <https://doi.org/10.1016/j.jbtep.2010.03.006>
- Bernstein, D. P., Fink, L., Handelsman, L., Foote, J., Lovejoy, M., Wenzel, K., Sapareto, E., & Ruggiero, J. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *The American Journal of Psychiatry*, *151*(8), 1132–1136. <https://doi.org/10.1176/AJP.151.8.1132>
- Bi, X., Zhang, L., Yang, Y., & Zhang, W. (2020). Parenting Practices, Family Obligation, and Adolescents' Academic Adjustment: Cohort Differences with Social Change in China. *Journal of Research on Adolescence*, *30*(3), 721–734. <https://doi.org/10.1111/jora.12555>
- Bianchi, E. C. (2016). American individualism rises and falls with the economy: Cross-temporal evidence that individualism declines when the economy falters. *Journal of Personality and Social Psychology*, *111*(4), 567–584. <https://doi.org/10.1037/pspp0000114>

- Blodgett Salafia, E. H., & Gondoli, D. M. (2011). A 4-Year Longitudinal Investigation of the Processes by Which Parents and Peers Influence the Development of Early Adolescent Girls' Bulimic Symptoms. *The Journal of Early Adolescence, 31*(3), 390–414. <https://doi.org/10.1177/0272431610366248>
- Bödicker, C., Reinckens, J., Höfler, M., & Hoyer, J. (2022). Is Childhood Maltreatment Associated with Body Image Disturbances in Adulthood? A Systematic Review and Meta-Analysis. *Journal of Child & Adolescent Trauma, 15*(3), 523–538. <https://doi.org/10.1007/s40653-021-00379-5>
- Boone, L., Braet, C., Vandereycken, W., & Claes, L. (2013). Are Maladaptive Schema Domains and Perfectionism Related to Body Image Concerns in Eating Disorder Patients? *European Eating Disorders Review, 21*(1), 45–51. <https://doi.org/10.1002/erv.2175>
- Boone, L., Soenens, B., & Luyten, P. (2014). When or why does perfectionism translate into eating disorder pathology? A longitudinal examination of the moderating and mediating role of body dissatisfaction. *Journal of Abnormal Psychology, 123*(2), 412–418. <https://doi.org/10.1037/a0036254>
- Bou Khalil, R., Sleilaty, G., Richa, S., Seneque, M., Iceta, S., Rodgers, R., Alacreu-Crespo, A., Maimoun, L., Lefebvre, P., Renard, E., Courtet, P., & Guillaume, S. (2020). The Impact of Retrospective Childhood Maltreatment on Eating Disorders as Mediated by Food Addiction: A Cross-Sectional Study. *Nutrients, 12*(10), 2969. <https://doi.org/10.3390/nu12102969>
- Boyda, D., McFeeters, D., Dhingra, K., & Rhoden, L. (2018). Childhood maltreatment and psychotic experiences: Exploring the specificity of early maladaptive schemas. *Journal of Clinical Psychology, 74*(12), 2287–2301. <https://doi.org/10.1002/jclp.22690>
- Bremner, J. D., Vermetten, E., & Mazure, C. M. (2000). Development and preliminary psychometric properties of an instrument for the measurement of childhood trauma: The early trauma inventory. *Depression and Anxiety, 12*(1), 1–12. [https://doi.org/https://doi.org/10.1002/1520-6394\(2000\)12:1<1::AID-DA1>3.0.CO;2-W](https://doi.org/10.1002/1520-6394(2000)12:1<1::AID-DA1>3.0.CO;2-W)
- Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology, 28*(5), 759–775. <https://doi.org/10.1037/0012-1649.28.5.759>
- Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*(3), 185–216. <https://doi.org/10.1177/135910457000100301>
- Brown, J. M., Selth, S., Stretton, A., & Simpson, S. (2016). Do dysfunctional coping modes mediate the relationship between perceived parenting style and disordered eating behaviours? *Journal of Eating Disorders, 4*(1), 27. <https://doi.org/10.1186/s40337-016-0123-1>
- Buckingham-Howes, S., Armstrong, B., Pejsa-Reitz, M. C., Wang, Y., Witherspoon, D. O., Hager, E. R., & Black, M. M. (2018). BMI and disordered eating in urban, African American, adolescent girls:

- The mediating role of body dissatisfaction. *Eating Behaviors*, 29, 59–63.
<https://doi.org/10.1016/j.eatbeh.2018.02.006>
- Bulik, C. M., Sullivan, P. F., Fear, J. L., & Pickering, A. (2000). Outcome of anorexia nervosa: eating attitudes, personality, and parental bonding. *The International Journal of Eating Disorders*, 28(2), 139–147. [https://doi.org/10.1002/1098-108x\(200009\)28:2<139::aid-eat2>3.0.co;2-g](https://doi.org/10.1002/1098-108x(200009)28:2<139::aid-eat2>3.0.co;2-g)
- Burns, E. E., Fischer, S., Jackson, J. L., & Harding, H. G. (2012). Deficits in emotion regulation mediate the relationship between childhood abuse and later eating disorder symptoms. *Child Abuse and Neglect*, 36(1), 32–39. <https://doi.org/10.1016/j.chiabu.2011.08.005>
- Bush, K. R., & Peterson, G. W. (2008). Family influences on child development. In T. P. Gullotta & G. M. Blau (Eds.), *Handbook of childhood behavioral issues: Evidence-based approaches to prevention and treatment*. (pp. 43–67). Routledge/Taylor & Francis Group.
- Čablová, L., Pazderková, K., & Miovský, M. (2014). Parenting styles and alcohol use among children and adolescents: A systematic review. *Drugs: Education, Prevention and Policy*, 21(1), 1–13.
<https://doi.org/10.3109/09687637.2013.817536>
- Calvete, E. (2014). Emotional abuse as a predictor of early maladaptive schemas in adolescents: Contributions to the development of depressive and social anxiety symptoms. *Child Abuse and Neglect*, 38(4), 735–746. <https://doi.org/10.1016/j.chiabu.2013.10.014>
- Carrión, G. C., Nitzl, C., & Roldán, J. L. (2017). Mediation Analyses in Partial Least Squares Structural Equation Modeling: Guidelines and Empirical Examples. In H. Latan & R. Noonan (Eds.), *Partial Least Squares Path Modeling: Basic Concepts, Methodological Issues and Applications* (pp. 173–195). Springer International Publishing. https://doi.org/10.1007/978-3-319-64069-3_8
- Castellano, S., Rizzotto, A., Neri, S., Currenti, W., Guerrera, C. S., Pirrone, C., Coco, M., & Di Corrado, D. (2021). The relationship between body dissatisfaction and eating disorder symptoms in young women aspiring fashion models: The mediating role of stress. *European Journal of Investigation in Health, Psychology and Education*, 11(2), 607–615. <https://doi.org/10.3390/ejihpe11020043>
- Cecero, J. J., Beitel, M., & Prout, T. (2008). Exploring the relationships among early maladaptive schemas, psychological mindedness and self-reported college adjustment. *Psychology and Psychotherapy: Theory, Research and Practice*, 81(1), 105–118.
<https://doi.org/10.1348/147608307X216177>
- Cella, S., Iannaccone, M., & Cotrufo, P. (2020). Does body shame mediate the relationship between parental bonding, self-esteem, maladaptive perfectionism, body mass index and eating disorders? A structural equation model. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, 25(3), 667–678. <https://doi.org/10.1007/s40519-019-00670-3>

- Chan, J. K. N., Correll, C. U., Wong, C. S. M., Chu, R. S. T., Fung, V. S. C., Wong, G. H. S., Lei, J. H. C., & Chang, W. C. (2023). Life expectancy and years of potential life lost in people with mental disorders: a systematic review and meta-analysis. *EClinicalMedicine*, *65*, 102294. <https://doi.org/10.1016/j.eclinm.2023.102294>
- Chang, F., Wu, H. X., Ching, B. H. H., Li, X., & Chen, T. T. (2022). Behavior Problems in Deaf/Hard-of-Hearing Children: Contributions of Parental Stress and Parenting Styles. *Journal of Developmental and Physical Disabilities*. <https://doi.org/10.1007/s10882-022-09869-2>
- Chang, Y. C., & Tsai, Y. T. (2022). The Effect of University Students' Emotional Intelligence, Learning Motivation and Self-Efficacy on Their Academic Achievement—Online English Courses. *Frontiers in Psychology*, *13*, 203. <https://doi.org/10.3389/fpsyg.2022.818929>
- Checa, P., Abundis-Gutierrez, A., Pérez-Dueñas, C., & Fernández-Parra, A. (2019). Influence of maternal and paternal parenting style and behavior problems on academic outcomes in primary school. *Frontiers in Psychology*, *10*(MAR), 378. <https://doi.org/10.3389/fpsyg.2019.00378>
- Chen, G., He, J., Cai, Z., & Fan, X. (2020). Perceived parenting styles and body appreciation among Chinese adolescents: Exploring the mediating roles of dispositional mindfulness and self-compassion. *Children and Youth Services Review*, *119*, 105698. <https://doi.org/10.1016/j.chidyouth.2020.105698>
- Chen, G., He, J., Zhang, B., & Fan, X. (2021). Revisiting the relationship between body dissatisfaction and eating disorder symptoms in Chinese adolescents: the mediating roles of regulatory emotional self-efficacy and depression symptoms. *Eating and Weight Disorders*, *26*(1), 239–247. <https://doi.org/10.1007/s40519-020-00848-0>
- Chen, G., He, J., Zhang, B., & Fan, X. (2022). Body weight and body dissatisfaction among Chinese adolescents: Mediating and moderating roles of weight-related teasing. *Current Psychology*, *41*(1), 298–306. <https://doi.org/10.1007/s12144-019-00572-8>
- Chen, G., Liu, X., Song, J., He, J., & Fan, X. (2023). The relationship between trait emotional intelligence and disordered eating as mediated by body dissatisfaction and body image inflexibility. *Personality and Individual Differences*, *206*. <https://doi.org/10.1016/j.paid.2023.112142>
- Chen, I. J., Qi, H., & Sun, Z. (2023). The influence of the early maladaptive schemas on social adaptation: the mediation effect of gender traits. *Quality & Quantity*, *57*(6), 4939–4958. <https://doi.org/10.1007/s11135-022-01592-6>
- Chen, X., Fu, R., & Yiu, W. Y. V. (2019). Culture and parenting. In *Handbook of parenting: Biology and ecology of parenting, Vol. 2, 3rd ed.* (pp. 448–473). Routledge/Taylor & Francis Group. <https://doi.org/10.4324/9780429401459-14>

- Chen, X., Liu, T., Luo, J., & Ren, S. (2020). Data for teenagers' stressor, mental health, coping style, social support, parenting style and self-efficacy in South China. *Data in Brief*, 29. <https://doi.org/10.1016/j.dib.2020.105202>
- Chen, Y., Zhang, Y., Zhang, L., Luo, F., Xu, W., Huang, J., Yang, L., & Zhang, W. (2021). Childhood emotional neglect and problematic mobile phone use among Chinese adolescents: A longitudinal moderated mediation model involving school engagement and sensation seeking. *Child Abuse & Neglect*, 115, 104991. <https://doi.org/10.1016/j.chiabu.2021.104991>
- Cheng, H. L., & Mallinckrodt, B. (2009). Parental Bonds, Anxious Attachment, Media Internalization, and Body Image Dissatisfaction: Exploring a Mediation Model. *Journal of Counseling Psychology*, 56(3), 365–375. <https://doi.org/10.1037/a0015067>
- Cheng, W., & Wu, C. C. (2021). Family Socioeconomic Status and Children's Gender Differences in Taiwanese Teenagers' Perception of Parental Rearing Behaviors. *Journal of Child and Family Studies*. <https://doi.org/10.1007/s10826-021-01965-9>
- Choi, N. (2005). Self-efficacy and self-concept as predictors of college students' academic performance. *Psychology in the Schools*, 42(2), 197–205. <https://doi.org/10.1002/pits.20048>
- Cid Colom, J. (2016). El Esquema como organizador de la personalidad y sus trastornos: Estudio psicométrico de la adaptación Española del Young Schema Questionnaire-Short Form [Universitat Autònoma de Barcelona]. In *Doctoral thesis*. <http://www.tdx.cat/handle/10803/370109>
- Coccia, C., Darling, C. A., Rehm, M., Cui, M., & Sathe, S. K. (2012). Adolescent Health, Stress and Life Satisfaction: The Paradox of Indulgent Parenting. *Stress and Health*, 28(3), 211–221. <https://doi.org/10.1002/smi.1426>
- Cohen, J. (1988). *Statistical power analysis for behavioral sciences* (2nd Ed.). Routledge.
- Cohrdes, C., & Mauz, E. (2020). Self-Efficacy and Emotional Stability Buffer Negative Effects of Adverse Childhood Experiences on Young Adult Health-Related Quality of Life. *Journal of Adolescent Health*, 67(1), 93–100. <https://doi.org/10.1016/j.jadohealth.2020.01.005>
- Conceição, E. M., Gomes, F. V. S., Vaz, A. R., Pinto-Bastos, A., & Machado, P. P. P. (2017). Prevalence of eating disorders and picking/nibbling in elderly women. *International Journal of Eating Disorders*, 50(7), 793–800. <https://doi.org/10.1002/eat.22700>
- Coolican, H. (2017). *Research Methods and Statistics in Psychology*. Taylor & Francis. <https://books.google.com.tr/books?id=mgZEAwAAQBAJ>
- Cort, N. A., Toth, S. L., Cerulli, C., & Rogosch, F. (2011). Maternal intergenerational transmission of childhood multitype maltreatment. *Journal of Aggression, Maltreatment and Trauma*, 20(1), 20–39. <https://doi.org/10.1080/10926771.2011.537740>

- Cubis, J., Lewin, T., & Dawes, F. (1989). Australian Adolescents' Perceptions of their Parents. *Australian & New Zealand Journal of Psychiatry*, 23(1), 35–47. <https://doi.org/10.3109/00048678909062590>
- Dakanalis, A., Clerici, M., Bartoli, F., Caslini, M., Crocamo, C., Riva, G., & Carrà, G. (2017). Risk and maintenance factors for young women's DSM-5 eating disorders. *Archives of Women's Mental Health*, 20(6), 721–731. <https://doi.org/10.1007/s00737-017-0761-6>
- Dakanalis, A., Favagrossa, L., Clerici, M., Prunas, A., Colmegna, F., Zanetti, M. A., & Riva, G. (2015). Body Dissatisfaction and Eating Disorder Symptomatology: A Latent Structural Equation Modeling Analysis of Moderating Variables in 18-to-28-Year-Old Males. *The Journal of Psychology*, 149(1), 85–112. <https://doi.org/10.1080/00223980.2013.842141>
- Dakanalis, A., Zanetti, A. M., Riva, G., Colmegna, F., Volpato, C., Madeddu, F., & Clerici, M. (2015). Male body dissatisfaction and eating disorder symptomatology: Moderating variables among men. *Journal of Health Psychology*, 20(1), 80–90. <https://doi.org/10.1177/1359105313499198>
- DaLomba, E., Mansur, S., Bonsaksen, T., & Greer, M. J. (2021). Exploring graduate occupational and physical therapy students' approaches to studying, self-efficacy, and positive mental health. *BMC Medical Education*, 21(1), 1–8. <https://doi.org/10.1186/s12909-021-02550-w>
- Daly, M., & Costigan, E. (2022). Trends in eating disorder risk among U.S. college students, 2013–2021. *Psychiatry Research*, 317, 114882. <https://doi.org/10.1016/j.psychres.2022.114882>
- Dámaso-Flores, J., & Serpa-Barrientos, A. (2022). Modelo Explicativo del Rendimiento Académico Asociado a Estilos de Crianza, Agresión y Resentimiento en Adolescentes Peruanos. *Revista Iberoamericana de Diagnóstico y Evaluación – e Avaliação Psicológica*, 62(1), 5. <https://doi.org/10.21865/RIDEP62.1.01>
- Darling, N., & Steinberg, L. (1993). Parenting Style as Context: An Integrative Model. *Psychological Bulletin*, 113(3), 487–496. <https://doi.org/10.1037/0033-2909.113.3.487>
- De Panfilis, C., Rabbaglio, P., Rossi, C., Zita, G., & Maggini, C. (2003). Body Image Disturbance, Parental Bonding and Alexithymia in Patients with Eating Disorders. *Psychopathology*, 36(5), 239–246. <https://doi.org/10.1159/000073449>
- De Paoli, T., Fuller-Tyszkiewicz, M., & Krug, I. (2017). Insecure attachment and maladaptive schema in disordered eating: The mediating role of rejection sensitivity. *Clinical Psychology & Psychotherapy*, 24(6), 1273–1284. <https://doi.org/10.1002/cpp.2092>
- De Valle, M. K., Gallego-García, M., Williamson, P., & Wade, T. D. (2021). Social media, body image, and the question of causation: Meta-analyses of experimental and longitudinal evidence. *Body Image*, 39, 276–292. <https://doi.org/10.1016/j.bodyim.2021.10.001>

- Deas, S., Power, K., Collin, P., Yellowlees, A., & Grierson, D. (2011). The Relationship between Disordered Eating, Perceived Parenting, and Perfectionistic Schemas. *Cognitive Therapy and Research, 35*(5), 414–424. <https://doi.org/10.1007/s10608-010-9319-x>
- Dehghan, P., Aynehchi, A., Saleh-Ghadimi, S., Asghari Jafarabadi, M., & Moslemi, E. (2022). Association of self-efficacy and coping with sleep quality and disturbances with an emphasis on mediating role of eating behaviors and body mass index: A structural equation modeling approach. *Current Psychology, 41*(11), 7471–7481. <https://doi.org/10.1007/s12144-021-01774-9>
- DeWitt, J., & Attia, E. (2017). Anorexia Nervosa. In T. Wade (Ed.), *Encyclopedia of Feeding and Eating Disorders* (pp. 13–16). Springer Singapore. https://doi.org/10.1007/978-981-287-104-6_51
- Dijkstra, T. K., & Henseler, J. (2015). Consistent Partial Least Squares Path Modeling. *MIS Quarterly, 39*(2), 297–316. <https://www.jstor.org/stable/26628355>
- Ding, X., Zheng, L., Liu, Y., Zhang, W., Wang, N., Duan, H., & Wu, J. (2023). Parenting styles and psychological resilience: The mediating role of error monitoring. *Biological Psychology, 180*. <https://doi.org/10.1016/j.biopsycho.2023.108587>
- Doumit, R., Abi Kharma, J., Sanchez-Ruiz, M. J., & Zeeni, N. (2018). Predictors of Disordered Eating in Young Males. *Community Mental Health Journal, 54*(2), 236–244. <https://doi.org/10.1007/s10597-017-0163-2>
- Duarte, C., & Pinto-Gouveia, J. (2017). The impact of early shame memories in Binge Eating Disorder: The mediator effect of current body image shame and cognitive fusion. *Psychiatry Research, 258*, 511–517. <https://doi.org/10.1016/j.psychres.2017.08.086>
- Dunkley, D. M., Masheb, R. M., & Grilo, C. M. (2010). Childhood maltreatment, depressive symptoms, and body dissatisfaction in patients with binge eating disorder: The mediating role of self-criticism. *International Journal of Eating Disorders, 43*(3), NA-NA. <https://doi.org/10.1002/eat.20796>
- Dworkin, E., Javdani, S., Verona, E., & Campbell, R. (2014). Child sexual abuse and disordered eating: The mediating role of impulsive and compulsive tendencies. *Psychology of Violence, 4*(1), 21–36. <https://doi.org/10.1037/a0031779>
- Edwards, D., & Arntz, A. (2012). Schema Therapy in Historical Perspective. In *The Wiley-Blackwell Handbook of Schema Therapy: Theory, Research, and Practice* (pp. 1–26). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781119962830.ch1>
- Enten, R. S., & Golan, M. (2009). Parenting styles and eating disorder pathology. *Appetite, 52*(3), 784–787. <https://doi.org/10.1016/j.appet.2009.02.013>
- Eshak, E. S., Ghazawy, E. R., & Mohammed, E. S. (2020). Sociocultural attitudes toward appearance and body shape dissatisfaction in adolescent Egyptian females: Association and moderators. *Health Promotion International, 35*(6), 1283–1290. <https://doi.org/10.1093/heapro/daz126>

- Esmailian, N., Dehghani, M., Koster, E. H. W., & Hoorelbeke, K. (2019). Early maladaptive schemas and borderline personality disorder features in a nonclinical sample: A network analysis. *Clinical Psychology & Psychotherapy*, 26(3), 388–398. <https://doi.org/10.1002/cpp.2360>
- Estévez, A., Ozerinjauregi, N., & Herrero-Fernández, D. (2016). Maladaptive Schemas as Mediators in the Relationship Between Child Sexual Abuse and Displaced Aggression. *Journal of Child Sexual Abuse*, 25(4), 449–465. <https://doi.org/10.1080/10538712.2016.1156207>
- Estévez, A., Ozerinjauregi, N., Herrero-Fernández, D., & Jauregui, P. (2019). The Mediator Role of Early Maladaptive Schemas Between Childhood Sexual Abuse and Impulsive Symptoms in Female Survivors of CSA. *Journal of Interpersonal Violence*, 34(4), 763–784. <https://doi.org/10.1177/0886260516645815>
- Fairburn, C. G. (2008). Cognitive behavior therapy and eating disorders. In *Cognitive behavior therapy and eating disorders*. Guilford Press. <https://www.guilford.com/books/Cognitive-Behavior-Therapy-and-Eating-Disorders/Christopher-Fairburn/9781593857097>
- Fairburn, C. G., & Beglin, S. J. (1994). Assessment of eating disorders: Interview or self-report questionnaire? *International Journal of Eating Disorders*, 16(4), 363–370. [https://doi.org/10.1002/1098-108X\(199412\)16:4<363::AID-EAT2260160405>3.0.CO;2-%23](https://doi.org/10.1002/1098-108X(199412)16:4<363::AID-EAT2260160405>3.0.CO;2-%23)
- Farnia, V., Asadi, R., Abdoli, N., Radmehr, F., Alikhani, M., Khodamoradi, M., Behrouz, B., & Salemi, S. (2020). Psychometric properties of the Persian version of General Self-Efficacy Scale (GSES) among substance abusers the year 2019–2020 in Kermanshah city. *Clinical Epidemiology and Global Health*, 8(3), 949–953. <https://doi.org/10.1016/j.cegh.2020.03.002>
- Fassino, S., Amianto, F., Rocca, G., & Daga, G. A. (2010). Parental bonding and eating psychopathology in bulimia nervosa: personality traits as possible mediators. *Epidemiologia e Psichiatria Sociale*, 19(3), 214–222.
- Feist, J., Feist, G., & Roberts, T. A. (2012). *Theories of Personality: Eighth Edition*. McGraw-Hill Higher Education. https://books.google.es/books?id=_S40AAAAQBAJ
- Feng, L., Zhang, L., & Zhong, H. (2021). Perceived parenting styles and mental health: The multiple mediation effect of perfectionism and altruistic behavior. *Psychology Research and Behavior Management*, 14, 1157–1170. <https://doi.org/10.2147/PRBM.S318446>
- Feyzioglu, A., Taşlıoğlu Saymer, A. C., Özçelik, D., Tarımtay Altun, F., & Budak, E. N. (2022). The mediating role of early maladaptive schemas in the relationship between early childhood trauma and alexithymia. *Current Psychology*. <https://doi.org/10.1007/s12144-022-02988-1>
- Fichter, M. M., & Quadflieg, N. (2016). Mortality in eating disorders - Results of a large prospective clinical longitudinal study. *International Journal of Eating Disorders*, 49(4), 391–401. <https://doi.org/10.1002/eat.22501>

- Filipova, A. A., & Stoffel, C. L. (2016). The prevalence of binge eating disorder and its relationship to work and classroom productivity and activity impairment. *Journal of American College Health, 64*(5), 349–361. <https://doi.org/10.1080/07448481.2016.1150283>
- Fischer, S., Stojek, M., & Hartzell, E. (2010). Effects of multiple forms of childhood abuse and adult sexual assault on current eating disorder symptoms. *Eating Behaviors, 11*(3), 190–192. <https://doi.org/10.1016/j.eatbeh.2010.01.001>
- Fortes, L. de S., Ferreira, M. E. C., de Oliveira, S. M. F., Cyrino, E. S., & Almeida, S. S. (2015). A socio-sports model of disordered eating among Brazilian male athletes. *Appetite, 92*, 29–35. <https://doi.org/10.1016/j.appet.2015.05.005>
- Galmiche, M., Déchelotte, P., Lambert, G., & Tavolacci, M. P. (2019). Prevalence of eating disorders over the 2000–2018 period: a systematic literature review. *The American Journal of Clinical Nutrition, 109*(5), 1402–1413. <https://doi.org/10.1093/ajcn/nqy342>
- Gan, W. Y., Mohd Nasir, M. T., Zalilah, M. S., & Hazizi, A. S. (2011). Direct and indirect effects of sociocultural influences on disordered eating among Malaysian male and female university students. A mediation analysis of psychological distress. *Appetite, 56*(3), 778–783. <https://doi.org/10.1016/j.appet.2011.03.005>
- Gao, Y., Yao, W., Guo, Y., & Liao, Z. (2022). The Effect of Collectivism on Mental Health during COVID-19: A Moderated Mediation Model. *International Journal of Environmental Research and Public Health, 19*(23), 15570. <https://doi.org/10.3390/ijerph192315570>
- García, F., & Gracia, E. (2014). The Indulgent Parenting Style and Developmental Outcomes in South European and Latin American Countries. In H. Selin (Ed.), *Parenting Across Cultures: Childrearing, Motherhood and Fatherhood in Non-Western Cultures* (pp. 419–433). Springer Netherlands. https://doi.org/10.1007/978-94-007-7503-9_31
- García, O. F., Serra, E., Zacarés, J. J., & García, F. (2018). Parenting styles and short- and long-term socialization outcomes: A study among Spanish adolescents and older adults. *Psychosocial Intervention, 27*(3), 153–161. <https://doi.org/10.5093/pi2018a21>
- Gaskin, J. (2018). *Missing Data Marker in SPSS and SmartPLS 3*. YouTube.
- Gay, L. E., Harding, H. G., Jackson, J. L., Burns, E. E., & Baker, B. D. (2013). Attachment style and early maladaptive schemas as mediators of the relationship between childhood emotional abuse and intimate partner violence. *Journal of Aggression, Maltreatment and Trauma, 22*(4), 408–424. <https://doi.org/10.1080/10926771.2013.775982>
- Gerbasi, M. E., Richards, L. K., Thomas, J. J., Agnew-Blais, J. C., Thompson-Brenner, H., Gilman, S. E., & Becker, A. E. (2014). Globalization and eating disorder risk: Peer influence, perceived social

- norms, and adolescent disordered eating in Fiji. *International Journal of Eating Disorders*, 47(7), 727–737. <https://doi.org/10.1002/eat.22349>
- Gerges, S., Hallit, S., Malaeb, D., & Obeid, S. (2022). Maladaptive Cognitive Schemas as Predictors of Disordered Eating: Examining the Indirect Pathway through Emotion Regulation Difficulties. *International Journal of Environmental Research and Public Health*, 19(18), 11620. <https://doi.org/10.3390/ijerph191811620>
- Ghazzawi, H. A., Nimer, L. S., Sweidan, D. H., Alhaj, O. A., Abulawi, D., Amawi, A. T., Levine, M. P., & Jahrami, H. (2023). The global prevalence of screen-based disordered eating and associated risk factors among high school students: systematic review, meta-analysis, and meta-regression. *Journal of Eating Disorders*, 11(1), 128. <https://doi.org/10.1186/s40337-023-00849-1>
- Gibson, M., & Francis, A. J. P. (2019). Intergenerational Transfer of Early Maladaptive Schemas in Mother–Daughter Dyads, and the Role of Parenting. *Cognitive Therapy and Research*, 43(4), 737–747. <https://doi.org/10.1007/s10608-018-09994-3>
- Gilbert, F., Daffern, M., Talevski, D., & Ogloff, J. R. P. (2013). The role of aggression-related cognition in the aggressive behavior of offenders: A general aggression model perspective. *Criminal Justice and Behavior*, 40(2), 119–138. <https://doi.org/10.1177/0093854812467943>
- Glasofer, D. R., Haaga, D. A. F., Hannallah, L., Field, S. E., Kozlosky, M., Reynolds, J., Yanovski, J. A., & Tanofsky-Kraff, M. (2013). Self-efficacy beliefs and eating behavior in adolescent girls at-risk for excess weight gain and binge eating disorder. *International Journal of Eating Disorders*, 46(7), 663–668. <https://doi.org/10.1002/eat.22160>
- Gleason, J. H., Alexander, A. M., Somers, C. L., & Watkins, D. (2000). LATER ADOLESCENTS' REACTIONS TO THREE TYPES OF CHILDHOOD TEASING: RELATIONS WITH SELF-ESTEEM AND BODY IMAGE. *SOCIAL BEHAVIOR AND PERSONALITY*, 28(5), 471–480. <https://doi.org/10.2444/sbp.2000.28.5.471>
- Goldschen, L., Lundblad, W., Fertig, A. M., Auster, L. S., Schwarzbach, H. L., & Chang, J. C. (2019). Navigating the university transition among women who self-report an eating disorder: A qualitative study. *International Journal of Eating Disorders*, 52(7), 795–800. <https://doi.org/10.1002/eat.23071>
- Gomez, F., Kilpela, L. S., Middlemass, K. M., & Becker, C. B. (2020). Sexual trauma uniquely associated with eating disorders: A replication study. *Psychological Trauma: Theory, Research, Practice, and Policy*, No Pagination Specified-No Pagination Specified. <https://doi.org/10.1037/tra0000586>
- Gómez-Beneyto, M., Pedrós, A., Tomás, A., Aguilar, K., & Leal, C. (1993). Psychometric properties of the parental bonding instrument in a spanish sample. *Social Psychiatry and Psychiatric Epidemiology*, 28(5), 252–255. <https://doi.org/10.1007/BF00788745>

- Gonçalves, S., Moreira, C., Gonçalves, M., Vieira, A. I., & Machado, B. C. (2020). The role of the perception of family environment in relation to body dissatisfaction, disordered eating and difficulties in close relationships. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, 25(1), 205–213. <https://doi.org/10.1007/s40519-018-0551-9>
- Gonzaga, I., Claumann, G. S., Scarabelot, K. S., Silva, D. A. S., & Pelegrini, A. (2021). Body image dissatisfaction in adolescents: Comparison with physical activity, teasing and social support. *Journal of Health Psychology*, 26(10), 1651–1660. <https://doi.org/10.1177/1359105319887796>
- Gouveia, V. V., Clemente, M., & Espinosa, P. (2003). The Horizontal and Vertical Attributes of Individualism and Collectivism in a Spanish Population. *The Journal of Social Psychology*, 143(1), 43–63. <https://doi.org/10.1080/00224540309598430>
- Gouveia, V. V., Milfont, T. L., Del, M., Martínez, C., & Paterna, C. (2011). Individualism-collectivism as predictors of prejudice toward Gypsies in Spain. *Revista Interamericana de Psicología/Interamerican Journal of Psychology-2011*, 45(2), 223–234. <https://journal.sipsych.org/index.php/IJP/article/view/152>
- Greenfield, P. M. (2009). Linking social change and developmental change: Shifting pathways of human development. *Developmental Psychology*, 45(2), 401–418. <https://doi.org/10.1037/a0014726>
- Greenleaf, C., Petrie, T. A., & Martin, S. B. (2014). Relationship of weight-based teasing and adolescents' psychological well-being and physical health. *Journal of School Health*, 84(1), 49–55. <https://doi.org/10.1111/josh.12118>
- Grenon, R., Tasca, G. A., Maxwell, H., Balfour, L., Proulx, G., & Bissada, H. (2016). Parental bonds and body dissatisfaction in a clinical sample: The mediating roles of attachment anxiety and media internalization. *Body Image*, 19, 49–56. <https://doi.org/10.1016/j.bodyim.2016.08.005>
- Grogan, K., MacGarry, D., Bramham, J., Scriven, M., Maher, C., & Fitzgerald, A. (2020). Family-related non-abuse adverse life experiences occurring for adults diagnosed with eating disorders: A systematic review. *Journal of Eating Disorders*, 8(1). <https://doi.org/10.1186/s40337-020-00311-6>
- Grogan, S. (2016). *Body image: understanding body dissatisfaction in men, women, and children*. In *Routledge* (3rd ed.). Routledge. <https://www.taylorfrancis.com/books/mono/10.4324/9781315681528/body-image-sarah-grogan>
- Guardabassi, V., Mirisola, A., & Tomasetto, C. (2018). How is weight stigma related to children's health-related quality of life? A model comparison approach. *Quality of Life Research*, 27(1), 173–183. <https://doi.org/10.1007/s11136-017-1701-7>
- Guardabassi, V., & Tomasetto, C. (2022). Weight-based teasing, body dissatisfaction, and eating restraint: Multilevel investigation among primary schoolchildren. *Health Psychology*, 41(8), 527–537. <https://doi.org/10.1037/hea0001213>

- Gunnarsdottir, T., Njardvik, U., Olafsdottir, A. S., Craighead, L. W., & Bjarnason, R. (2012). Teasing and social rejection among obese children enrolling in family-based behavioural treatment: effects on psychological adjustment and academic competencies. *International Journal of Obesity*, *36*(1), 35–44. <https://doi.org/10.1038/ijo.2011.181>
- Guo, X., Peng, Q., Wu, S., Li, Y., Dong, W., Tang, H., Lu, G., & Chen, C. (2023). Perceived parenting style and Chinese nursing undergraduates' learning motivation: The chain mediating roles of self-efficacy and positive coping style. *Nurse Education in Practice*, *68*, 103607. <https://doi.org/10.1016/j.nepr.2023.103607>
- Gutzwiller, J., Oliver, J. M., & Katz, B. M. (2003). Eating Dysfunctions in College Women: The Roles of Depression and Attachment to Fathers. In *Journal of American College Health* (Vol. 52, Issue 1, pp. 27–32). Heldref Publications. <https://doi.org/10.1080/07448480309595720>
- Hadjigeorgiou, C., Solea, A., Querol, S. E., Keski-Rahkonen, A., Michels, N., Russo, P., Thumann, B. F., Pala, V., & Danner, U. (2018). Disordered eating in three different age groups in Cyprus: a comparative cross-sectional study. *Public Health*, *162*, 104–110. <https://doi.org/10.1016/j.puhe.2018.05.024>
- Haines, J., Neumark-Sztainer, D., Eisenberg, M. E., & Hannan, P. J. (2006). Weight Teasing and Disordered Eating Behaviors in Adolescents: Longitudinal Findings from Project EAT (Eating Among Teens). *Pediatrics*, *117*(2), e209–e215. <https://doi.org/10.1542/peds.2005-1242>
- Hair, J. F., Black, W. C., & Babin, B. J. (2018). *Multivariate Data Analysis* (8th ed.). Cengage. <https://books.google.com/books?id=0R9ZswEACAAJ>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2013). *Multivariate Data Analysis*. Pearson Education Limited. <https://books.google.com/books?id=VvXZnQEACAAJ>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. SAGE Publications. <https://books.google.com.tr/books?id=6z83EAAAQBAJ>
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. SAGE Publications. <https://books.google.com/books?id=IFiarYXE1PoC>
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.). SAGE Publications.
- Haj-Yahia, M. M., Hassan-Abbas, N., Malka, M., & Sokar, S. (2021). Exposure to Family Violence in Childhood, Self-Efficacy, and Posttraumatic Stress Symptoms in Young Adulthood. *Journal of Interpersonal Violence*, *36*(17–18), NP9548–NP9575. <https://doi.org/10.1177/0886260519860080>

- Harned, M. S. (2000). Harassed Bodies: An Examination of the Relationships Among Women's Experiences of Sexual Harassment, Body Image, and Eating Disturbances. *Psychology of Women Quarterly*, 24(4), 336–348. <https://doi.org/10.1111/j.1471-6402.2000.tb00216.x>
- Harris, C. L., Benjamin, K., Miao, Z., Fantuzzi, J., & Averill, M. (2023). Gender differences in factors related to eating competence in college students: Weight-and-body shame and guilt, weight satisfaction, weight loss effort, and eating disorder risk. *Eating Behaviors*, 51, 101797. <https://doi.org/10.1016/j.eatbeh.2023.101797>
- Haslam, D., Poniman, C., Filus, A., Sumargi, A., & Boediman, L. (2020). Parenting Style, Child Emotion Regulation and Behavioral Problems: The Moderating Role of Cultural Values in Australia and Indonesia. *Marriage and Family Review*, 56(4), 320–342. <https://doi.org/10.1080/01494929.2020.1712573>
- Haugh, J. A., Miceli, M., & DeLorme, J. (2017). Maladaptive Parenting, Temperament, Early Maladaptive Schemas, and Depression: A Moderated Mediation Analysis. *Journal of Psychopathology and Behavioral Assessment*, 39(1), 103–116. <https://doi.org/10.1007/s10862-016-9559-5>
- Hawke, L. D., & Provencher, M. D. (2011). Schema Theory and Schema Therapy in Mood and Anxiety Disorders: A Review. *Journal of Cognitive Psychotherapy*, 25(4), 257–276. <https://doi.org/10.1891/0889-8391.25.4.257>
- Hayek, J., Schneider, F., Lahoud, N., Tueni, M., & de Vries, H. (2022). Authoritative parenting stimulates academic achievement, also partly via self-efficacy and intention towards getting good grades. *PLOS ONE*, 17(3), e0265595. <https://doi.org/10.1371/journal.pone.0265595>
- Hayes, A. F. (2015). An Index and Test of Linear Moderated Mediation. *Multivariate Behavioral Research*, 50(1), 1–22. <https://doi.org/10.1080/00273171.2014.962683>
- Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication Monographs*, 85(1), 4–40. <https://doi.org/10.1080/03637751.2017.1352100>
- Hayes, A. F., & Rockwood, N. J. (2020). Conditional Process Analysis: Concepts, Computation, and Advances in the Modeling of the Contingencies of Mechanisms. *American Behavioral Scientist*, 64(1), 19–54. <https://doi.org/10.1177/0002764219859633>
- He, Y., Liu, C., Chen, Y., Huang, J., & Luo, R. (2020). Intergenerational transmission of parenting style in rural China and the mediation effect of Caregiver's mental health. *Children and Youth Services Review*, 117, 105319. <https://doi.org/10.1016/j.chilyouth.2020.105319>

- Heijens, T., Janssens, W., & Streukens, S. (2012). The effect of history of teasing on body dissatisfaction and intention to eat healthy in overweight and obese subjects. *European Journal of Public Health*, 22(1), 121–126. <https://doi.org/10.1093/eurpub/ckr012>
- Helme-Guizon, A., Gavard-Perret, M. L., Shankland, R., & Flaudias, V. (2021). Self-efficacy mediates the effect of framing eating disorders prevention message on intentions to have a sufficient weight: A pilot study. *International Journal of Environmental Research and Public Health*, 18(17), 8980. <https://doi.org/10.3390/ijerph18178980>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Hilbert, A. (2017). Binge-Eating Disorder. In *Encyclopedia of Feeding and Eating Disorders* (pp. 55–59).
- Hinds, T. S., & Giardino, A. P. (2017). Fundamentals. In *Child Physical Abuse: Current Evidence, Clinical Practice, and Policy Directions* (pp. 1–36). Springer International Publishing. https://doi.org/10.1007/978-3-319-61103-7_1
- Hong, M., & Dyakov, D. G. (2021). Parenting style effects on the mental health of college students: Their mediation by proactive personality and self-identity. *Journal of Psychology in Africa*, 31(5), 509–514. <https://doi.org/10.1080/14330237.2021.1978184>
- Hopwood, C. J., Ansell, E. B., Fehon, D. C., & Grilo, C. M. (2011). The mediational significance of negative/depressive affect in the relationship of childhood maltreatment and eating disorder features in adolescent psychiatric inpatients. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, 16(1), 9–16. <https://doi.org/10.1007/BF03327515>
- Hosseinzadeh, Z., Sayadi, M., & Orazani, N. (2021). The Mediating Role of Mindfulness in the Relationship between Self-Efficacy and Early Maladaptive Schemas among University Students. *Current Psychology*, 40(12), 5888–5898. <https://doi.org/10.1007/s12144-019-00487-4>
- Howard, L. M., Romano, K. A., & Heron, K. E. (2020). Prospective changes in disordered eating and body dissatisfaction across women's first year of college: The relative contributions of sociocultural and college adjustment risk factors. *Eating Behaviors*, 36, 101357. <https://doi.org/10.1016/j.eatbeh.2019.101357>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- Huang, H., Tang, H., Lu, G., Chen, C., Peng, Q., Zhang, Y., Liang, Y., Wan, X., & Ding, Y. (2022). Perceived Parenting Style and Subjective Well-Being among Chinese Nursing Undergraduates: The

- Role of Self-Efficacy and Gender. *International Journal of Environmental Research and Public Health*, 19(19). <https://doi.org/10.3390/ijerph191912654>
- Huang, V., DiMillo, J., & Koszycki, D. (2020). Psychometric Properties of the Parental Bonding Instrument in a Sample of Canadian Children. *Child Psychiatry & Human Development*, 51(5), 754–768. <https://doi.org/10.1007/s10578-020-00999-2>
- Hübner, C., Baldofski, S., Crosby, R. D., Müller, A., de Zwaan, M., & Hilbert, A. (2016). Weight-related teasing and non-normative eating behaviors as predictors of weight loss maintenance. A longitudinal mediation analysis. *Appetite*, 102, 25–31. <https://doi.org/10.1016/j.appet.2016.02.017>
- Hudson, J. I., Hiripi, E., Pope, H. G., & Kessler, R. C. (2007). The Prevalence and Correlates of Eating Disorders in the National Comorbidity Survey Replication. *Biological Psychiatry*, 61(3), 348–358. <https://doi.org/10.1016/j.biopsych.2006.03.040>
- Hund, A. R., & Espelage, D. L. (2005). Childhood Sexual Abuse, Disordered Eating, Alexithymia, and General Distress: A Mediation Model. *Journal of Counseling Psychology*, 52(4), 559–573. <https://doi.org/10.1037/0022-0167.52.4.559>
- Hymowitz, G., Salwen, J., & Salis, K. L. (2017). A mediational model of obesity related disordered eating: The roles of childhood emotional abuse and self-perception. *Eating Behaviors*, 26, 27–32. <https://doi.org/10.1016/j.eatbeh.2016.12.010>
- Iannaccone, M., D'Olimpio, F., Cella, S., & Cotrufo, P. (2016). Self-esteem, body shame and eating disorder risk in obese and normal weight adolescents: A mediation model. *Eating Behaviors*, 21, 80–83. <https://doi.org/10.1016/j.eatbeh.2015.12.010>
- Ievers-Landis, C. E., Dykstra, C., Uli, N., & O'riordan, M. A. (2019). Weight-related teasing of adolescents who are primarily obese: Roles of sociocultural attitudes towards appearance and physical activity self-efficacy. *International Journal of Environmental Research and Public Health*, 16(9). <https://doi.org/10.3390/ijerph16091540>
- Ingoldsby, B., Schvaneveldt, P., Supple, A., & Bush, K. (2003). The Relationship Between Parenting Behaviors and Adolescent Achievement and Self-Efficacy in Chile and Ecuador. *Marriage & Family Review*, 35(3–4), 139–159. https://doi.org/10.1300/J002v35n03_08
- Iwajomo, T., Bondy, S. J., de Oliveira, C., Colton, P., Trottier, K., & Kurdyak, P. (2021). Excess mortality associated with eating disorders: population-based cohort study. *The British Journal of Psychiatry*, 219(3), 487–493. <https://doi.org/10.1192/bjp.2020.197>
- Jaeger, B., Ruggiero, G. M., Edlund, B., Gomez-Perretta, C., Lang, F., Mohammadkhani, P., Sahleen-Veasey, C., Schomer, H., & Lamprecht, F. (2002). Body Dissatisfaction and Its Interrelations with Other Risk Factors for Bulimia nervosa in 12 Countries. *Psychotherapy and Psychosomatics*, 71(1), 54–61. <https://doi.org/10.1159/000049344>

- Jafary, F., Farahbakhsh, K., Shafiabadi, A., & Delavar, A. (2011). Quality of life and menopause: Developing a theoretical model based on meaning in life, self-efficacy beliefs, and body image. *Aging & Mental Health, 15*(5), 630–637. <https://doi.org/10.1080/13607863.2010.548056>
- Janiri, D., Sani, G., Piras, F., & Spalletta, G. (2020). Introduction on Childhood Trauma in Mental Disorders: A Comprehensive Approach. In *Childhood Trauma in Mental Disorders* (pp. 3–7). Springer International Publishing. https://doi.org/10.1007/978-3-030-49414-8_1
- Jankauskiene, R., & Baceviciene, M. (2022). Media Pressures, Internalization of Appearance Ideals and Disordered Eating among Adolescent Girls and Boys: Testing the Moderating Role of Body Appreciation. *Nutrients, 14*(11), 2227. <https://doi.org/10.3390/nu14112227>
- Jáuregui Lobera, I., Bolaños Ríos, P., & Garrido Casals, O. (2011). Parenting styles and eating disorders. *Journal of Psychiatric and Mental Health Nursing, 18*(8), 728–735. <https://doi.org/10.1111/j.1365-2850.2011.01723.x>
- Jenkins, P. E., Meyer, C., & Blissett, J. M. (2013). Childhood Abuse and Eating Psychopathology: The Mediating Role of Core Beliefs. *Journal of Aggression, Maltreatment & Trauma, 22*(3), 248–261. <https://doi.org/10.1080/10926771.2013.741665>
- Jenkins, P. E., & Price, T. (2018). Eating pathology in midlife women: Similar or different to younger counterparts? *International Journal of Eating Disorders, 51*(1), 3–9. <https://doi.org/10.1002/eat.22810>
- Jensen, C. D., & Steele, R. G. (2010). Validation of the Perceptions of Teasing Scale (POTS) in a Preadolescent Sample: Associations with Attitudes Toward Physical Activity. *Children's Health Care, 39*(4), 249–265. <https://doi.org/10.1080/02739615.2010.515925>
- Jiménez-Limas, K., Miranda-Barrera, V. A., Muñoz-Díaz, K. F., Novales-Huidobro, S. R., & Chico-Barba, G. (2022). Body Dissatisfaction, Distorted Body Image and Disordered Eating Behaviors in University Students: An Analysis from 2017-2022. *International Journal of Environmental Research and Public Health, 19*(18). <https://doi.org/10.3390/ijerph191811482>
- Jones, C. J., Leung, N., & Harris, G. (2006). Father-daughter relationship and eating psychopathology: The mediating role of core beliefs. *British Journal of Clinical Psychology, 45*(3), 319–330. <https://doi.org/10.1348/014466505X53489>
- Joshi, A., Otto, A. L., Ferris, J. C., & Regan, P. C. (2003). Parenting Styles and Academic Achievement in College Students. *Psychological Reports, 93*(3), 823–828. <https://doi.org/10.2466/pr0.2003.93.3.823>
- Kang, H. K., Rhodes, C., Rivers, E., Thornton, C. P., & Rodney, T. (2021). Prevalence of mental health disorders among undergraduate university students in the United States: A review. *Journal of*

- Psychosocial Nursing and Mental Health Services*, 59(2), 17–24. <https://doi.org/10.3928/02793695-20201104-03>
- Kapçı, E. G., & Küçüker, S. (2006). The parental bonding instrument: evaluation of psychometric properties with Turkish university students. *Turk psikiyatri dergisi = Turkish journal of psychiatry*, 17(4), 286–295. <http://www.ncbi.nlm.nih.gov/pubmed/17183445>
- Karim, A. K. M. R., & Begum, T. (2017). The Parental Bonding Instrument: A psychometric measure to assess parenting practices in the homes in Bangladesh. *Asian Journal of Psychiatry*, 25, 231–239. <https://doi.org/10.1016/j.ajp.2016.11.004>
- Keel, P. K., & Klump, K. L. (2003). Are eating disorders culture-bound syndromes? Implications for conceptualizing their etiology. *Psychological Bulletin*, 129(5), 747–769. <https://doi.org/10.1037/0033-2909.129.5.747>
- Kendler, K. S. (1996). Parenting: a genetic-epidemiologic perspective. *American Journal of Psychiatry*, 153(1), 11–20. <https://doi.org/10.1176/ajp.153.1.11>
- Kenney, S. R., Lac, A., Hummer, J. F., Grimaldi, E. M., & Labrie, J. W. (2015). Pathways of parenting style on adolescents' college adjustment, academic achievement, and alcohol risk. *Journal of College Student Retention: Research, Theory and Practice*, 17(2), 186–203. <https://doi.org/10.1177/1521025115578232>
- Keshavarz, S., & Mounts, N. S. (2017). Perceived Parenting Style of Fathers and Iranian Adolescents' Self-efficacy: The Moderating Role of Gender and Education. *Journal of Genetic Psychology*, 178(5), 281–290. <https://doi.org/10.1080/00221325.2017.1355772>
- Keshaviah, A., Edkins, K., Hastings, E. R., Krishna, M., Franko, D. L., Herzog, D. B., Thomas, J. J., Murray, H. B., & Eddy, K. T. (2014). Re-examining premature mortality in anorexia nervosa: A meta-analysis redux. *Comprehensive Psychiatry*, 55(8), 1773–1784. <https://doi.org/10.1016/j.comppsy.2014.07.017>
- Keshen, A., Helson, T., Town, J., & Warren, K. (2017). Self-efficacy as a predictor of treatment outcome in an outpatient eating disorder program. *Eating Disorders*, 25(5), 406–419. <https://doi.org/10.1080/10640266.2017.1324073>
- Keski-Rahkonen, A. (2021). Epidemiology of binge eating disorder: Prevalence, course, comorbidity, and risk factors. In *Current Opinion in Psychiatry* (Vol. 34, Issue 6, pp. 525–531). *Curr Opin Psychiatry*. <https://doi.org/10.1097/YCO.0000000000000750>
- Kessler, R. C., Berglund, P. A., Chiu, W. T., Deitz, A. C., Hudson, J. I., Shahly, V., Aguilar-Gaxiola, S., Alonso, J., Angermeyer, M. C., Benjet, C., Bruffaerts, R., De Girolamo, G., De Graaf, R., Maria Haro, J., Kovess-Masfety, V., O'Neill, S., Posada-Villa, J., Sasu, C., Scott, K., ... Xavier, M. (2013). The prevalence and correlates of binge eating disorder in the World Health Organization

- World Mental Health Surveys. *Biological Psychiatry*, 73(9), 904–914.
<https://doi.org/10.1016/j.biopsych.2012.11.020>
- Khodabakhsh, M. R., Borjali, A., Sohrabi, F., & Farrokhi, A. (2015). The Role of Emotion Regulation Difficulties as a Mediator of the Relationship between Body Image Disturbance and Disordered Eating Behavior. In *Int J Pediatr (Supplement.1)* (Vol. 3, Issue 1). <http://ijp.mums.ac.ir>
- Khosravani, V., Najafi, M., & Mohammadzadeh, A. (2020). The Young Schema Questionnaire-Short Form: A Persian Version Among a Large Sample of Psychiatric Patients. *International Journal of Mental Health and Addiction*, 18(4), 949–967. <https://doi.org/10.1007/s11469-018-9997-2>
- Khosravi, M., Seyedi Asl, S. T., Nazari Anamag, A., SabzehAra Langaroudi, M., Moharami, J., Ahmadi, S., Ganjali, A., Ghiasi, Z., Nafeli, M., & Kasaeiyan, R. (2023). Parenting styles, maladaptive coping styles, and disturbed eating attitudes and behaviors: a multiple mediation analysis in patients with feeding and eating disorders. *PeerJ*, 11, e14880. <https://doi.org/10.7717/peerj.14880>
- Kimball, H., Fuller-Tyszkiewicz, M., De Paoli, T., McKinlay, A., & Krug, I. (2019). Testing a new interpersonal model of disordered eating between Australian and East-Asian women: The relationships between theory of mind, maladaptive schemas, and appearance-based rejection sensitivity. *Psychiatry Research*, 275, 1–9. <https://doi.org/10.1016/j.psychres.2019.02.065>
- Kitamura, T., & Suzuki, T. (1993). A Validation Study of the Parental Bonding Instrument in a Japanese Population. *Psychiatry and Clinical Neurosciences*, 47(1), 29–36. <https://doi.org/10.1111/j.1440-1819.1993.tb02026.x>
- Kong, S., & Bernstein, K. (2009). Childhood trauma as a predictor of eating psychopathology and its mediating variables in patients with eating disorders. *Journal of Clinical Nursing*, 18(13), 1897–1907. <https://doi.org/10.1111/j.1365-2702.2008.02740.x>
- Kostanski, M., & Gullone, E. (2007). The impact of teasing on children's body image. *Journal of Child and Family Studies*, 16(3), 307–319. <https://doi.org/10.1007/s10826-006-9087-0>
- Kremer, I., Orbach, I., & Rosenbloom, T. (2013). Body Image Among Victims of Sexual and Physical Abuse. *Violence and Victims*, 28(2), 259–273. <https://doi.org/10.1891/0886-6708.VV-D-12-00015>
- Krug, I., Arroyo, M. D., Giles, S., Dang, A. B., Kiropoulos, L., De Paoli, T., Buck, K., Treasure, J., & Fuller-Tyszkiewicz, M. (2021). A new integrative model for the co-occurrence of non-suicidal self-injury behaviours and eating disorder symptoms. *Journal of Eating Disorders*, 9(1), 153. <https://doi.org/10.1186/s40337-021-00508-3>
- Krug, I., King, R. M., Youssef, G. J., Sorabji, A., Wertheim, E. H., Le Grange, D., Hughes, E. K., Letcher, P., & Olsson, C. A. (2016). The effect of low parental warmth and low monitoring on disordered eating in mid-adolescence: Findings from the Australian Temperament Project. *Appetite*, 105, 232–241. <https://doi.org/10.1016/j.appet.2016.05.015>

- Krukowski, R. A., Smith West, D., Philyaw Perez, A., Bursac, Z., Phillips, M. M., & Raczynski, J. M. (2009). Overweight children, weight-based teasing and academic performance. *International Journal of Pediatric Obesity*, *4*(4), 274–280. <https://doi.org/10.3109/17477160902846203>
- Lacroix, E., Smith, A. J., Husain, I. A., Orth, U., & von Ranson, K. M. (2023). Normative body image development: A longitudinal meta-analysis of mean-level change. *Body Image*, *45*, 238–264. <https://doi.org/10.1016/j.bodyim.2023.03.003>
- Lam, T. H., Lee, S. W., Fung, S., Ho, S. Y., Lee, P. W. H., & Stewart, S. M. (2009). Sociocultural influences on body dissatisfaction and dieting in Hong Kong girls. *European Eating Disorders Review*, *17*(2), 152–160. <https://doi.org/10.1002/erv.900>
- Lapid, M. I., Prom, M. C., Burton, M. C., McAlpine, D. E., Sutor, B., & Rummans, T. A. (2010). Eating disorders in the elderly. In *International Psychogeriatrics* (Vol. 22, Issue 4, pp. 523–536). Int Psychogeriatr. <https://doi.org/10.1017/S1041610210000104>
- Lavrič, M., & Naterer, A. (2020). The power of authoritative parenting: A cross-national study of effects of exposure to different parenting styles on life satisfaction. *Children and Youth Services Review*, *116*. <https://doi.org/10.1016/j.childyouth.2020.105274>
- Legenbauer, T., Radix, A. K., Augustat, N., & Schütt-Strömel, S. (2018). Power of Cognition: How Dysfunctional Cognitions and Schemas Influence Eating Behavior in Daily Life Among Individuals with Eating Disorders. *Frontiers in Psychology*, *9*(NOV), 2138. <https://doi.org/10.3389/fpsyg.2018.02138>
- Lessard, L. M., Lawrence, S. E., & Puhl, R. M. (2021). Weight-based victimization and school performance in adolescence: Can teachers help reduce academic risks? *School Psychology*, *36*(1), 69–74. <https://doi.org/10.1037/spq0000371>
- Lessard, L. M., Watson, R. J., & Puhl, R. M. (2020). Bias-Based Bullying and School Adjustment among Sexual and Gender Minority Adolescents: The Role of Gay-Straight Alliances. *Journal of Youth and Adolescence*, *49*(5), 1094–1109. <https://doi.org/10.1007/s10964-020-01205-1>
- Lewis-Smith, H., Diedrichs, P. C., Bond, R., & Harcourt, D. (2020). Psychological and sociocultural influences on body image among midlife women with and without a history of breast cancer: Testing the Tripartite Influence Model of Body Image. *Body Image*, *35*, 114–125. <https://doi.org/10.1016/j.bodyim.2020.08.011>
- Li, H., & Zheng, L. (2021). Associations between early life harshness, parents' parenting style, and relationship quality in China. *Personal Relationships*, *28*(4), 998–1016. <https://doi.org/10.1111/pere.12391>

- Li, X., Liu, M., Yu, H., Zhang, Z., & He, Z. (2022). The influence of sports on proactive personality and academic achievement of college students: The role of self-efficacy. *Frontiers in Psychology, 13*. <https://doi.org/10.3389/fpsyg.2022.943347>
- Li, X., Pu, R., & Phakdeephrot, N. (2022). The influence of achievement motivation on college students' employability: A chain mediation analysis of self-efficacy and academic performance. *Frontiers in Psychology, 13*. <https://doi.org/10.3389/fpsyg.2022.972910>
- Liang, V. X., Jackson, A. C., & McKenzie, V. L. (2011). The Effects of Teasing in Childhood or Adolescence on Young Adults' Body Image. *The Australian Educational and Developmental Psychologist, 28*(2), 101–115. <https://doi.org/10.1375/aedp.28.2.101>
- Lie, S. Ø., Rø, Ø., & Bang, L. (2019). Is bullying and teasing associated with eating disorders? A systematic review and meta-analysis. *International Journal of Eating Disorders, 52*(5), 497–514. <https://doi.org/10.1002/eat.23035>
- Lim, V. K. G., & Leng Loo, G. (2003). Effects of parental job insecurity and parenting behaviors on youth's self-efficacy and work attitudes. *Journal of Vocational Behavior, 63*(1), 86–98. [https://doi.org/10.1016/S0001-8791\(02\)00020-9](https://doi.org/10.1016/S0001-8791(02)00020-9)
- Lipson, S. K., Zhou, S., Abelson, S., Heinze, J., Jirsa, M., Morigney, J., Patterson, A., Singh, M., & Eisenberg, D. (2022). Trends in college student mental health and help-seeking by race/ethnicity: Findings from the national healthy minds study, 2013–2021. *Journal of Affective Disorders, 306*, 138–147. <https://doi.org/10.1016/j.jad.2022.03.038>
- Liu, J., Li, L., & Fang, F. (2011). Psychometric properties of the Chinese version of the Parental Bonding Instrument. *International Journal of Nursing Studies, 48*(5), 582–589. <https://doi.org/10.1016/j.ijnurstu.2010.10.008>
- Llorca, A., Cristina Richaud, M., & Malonda, E. (2017). Parenting, Peer Relationships, Academic Self-efficacy, and Academic Achievement: Direct and Mediating Effects. *Frontiers in Psychology, 8*(DEC). <https://doi.org/10.3389/fpsyg.2017.02120>
- Llorente, E., Gleaves, D. H., Warren, C. S., Pérez-de-Eulate, L., & Rakhkovskaya, L. (2015). Translation and validation of a spanish version of the sociocultural attitudes towards appearance questionnaire-4 (SATAQ-4). *International Journal of Eating Disorders, 48*(2), 170–175. <https://doi.org/10.1002/eat.22263>
- Lodewyk, K. R., & Sullivan, P. (2016). Associations between anxiety, self-efficacy, and outcomes by gender and body size dissatisfaction during fitness in high school physical education. *Physical Education and Sport Pedagogy, 21*(6), 603–615. <https://doi.org/10.1080/17408989.2015.1095869>
- López-Gil, J. F., García-Hermoso, A., Smith, L., Firth, J., Trott, M., Mesas, A. E., Jiménez-López, E., Gutiérrez-Espinoza, H., Tárraga-López, P. J., & Victoria-Montesinos, D. (2023). Global Proportion

- of Disordered Eating in Children and Adolescents: A Systematic Review and Meta-analysis. *JAMA Pediatrics*, 177(4), 363–372. <https://doi.org/10.1001/jamapediatrics.2022.5848>
- López-Guimerà, G., Fauquet, J., Sánchez-Carracedo, D., Barrada, J. R., Saldaña, C., & Masnou-Roig, A. (2012). Psychometric properties of the Perception of Teasing Scale in a Spanish adolescent sample: POTS-S. *Eating and Weight Disorders*, 17(3). <https://doi.org/10.3275/8245>
- Losekam, S., Goetzky, B., Kraeling, S., Rief, W., & Hilbert, A. (2010). Physical activity in normal-weight and overweight youth: Associations with weight teasing and self-efficacy. *Obesity Facts*, 3(4), 239–244. <https://doi.org/10.1159/000319433>
- Lu, F. Y., Wen, S., Deng, G., & Tang, Y. L. (2017). Self-concept mediates the relationship between childhood maltreatment and abstinence motivation as well as self-efficacy among drug addicts. *Addictive Behaviors*, 68, 52–58. <https://doi.org/10.1016/j.addbeh.2017.01.017>
- Lunner, K., Werthem, E. H., Thompson, J. K., Paxton, S. J., McDonald, F., & Halvaarson, K. S. (2000). A cross-cultural examination of weight-related teasing, body image, and eating disturbance in Swedish and Australian samples. *International Journal of Eating Disorders*, 28(4), 430–435. [https://doi.org/10.1002/1098-108X\(200012\)28:4<430::AID-EAT11>3.0.CO;2-Y](https://doi.org/10.1002/1098-108X(200012)28:4<430::AID-EAT11>3.0.CO;2-Y)
- Lydecker, J. A., Winschel, J., Gilbert, K., & Cotter, E. W. (2023). School absenteeism and impairment associated with weight bullying. *Journal of Adolescence*, 95(7), 1478–1487. <https://doi.org/10.1002/jad.12220>
- Maccoby, E. E. (1992). The Role of Parents in the Socialization of Children: An Historical Overview. *Developmental Psychology*, 28(6), 1006–1017. <https://doi.org/10.1037/0012-1649.28.6.1006>
- Mącik, D. (2021). Temperament, parenting styles and the intensity of early maladaptive schemas: assessment of correlations in a non-clinical adult group. *Behavioural and Cognitive Psychotherapy*, 49(2), 218–232. <https://doi.org/10.1017/S1352465820000831>
- MacNeil, L., Esposito-Smythers, C., Mehlenbeck, R., & Weismore, J. (2012). The effects of avoidance coping and coping self-efficacy on eating disorder attitudes and behaviors: A stress-diathesis model. *Eating Behaviors*, 13(4), 293–296. <https://doi.org/10.1016/J.EATBEH.2012.06.005>
- Maftei, A. (2023). How do social networks, controlling parenting, and interpersonal sensitivity contribute to adolescents' appearance anxiety? *Current Psychology*, 42(31), 27035–27046. <https://doi.org/10.1007/s12144-022-03839-9>
- Maher, A., Cason, L., Huckstepp, T., Stallman, H., Kannis-Dymand, L., Milliar, P., Mason, J., Wood, A., & Allen, A. (2022). Early maladaptive schemas in eating disorders: A systematic review. *European Eating Disorders Review: The Journal of the Eating Disorders Association*, 30(1), 3–22. <https://doi.org/10.1002/ERV.2866>

- Mahmoodi, M., Moloodi, R., Ghaderi, A., Babai, Z., Saleh, Z., Alasti, H., Naghashian, F., & Mohammadpour, Z. (2016). The Persian Version of Eating Disorder Examination Questionnaire and Clinical Impairment Assessment: Norms and Psychometric Properties for Undergraduate Women. *Iranian Journal of Psychiatry, 11*(2), 67–74. <http://www.ncbi.nlm.nih.gov/pubmed/27437002>
- Mahrer, N. E., Holly, L. E., Luecken, L. J., Wolchik, S. A., & Fabricius, W. (2019). Parenting Style, Familism, and Youth Adjustment in Mexican American and European American Families. *Journal of Cross-Cultural Psychology, 50*(5), 659–675. <https://doi.org/10.1177/0022022119839153>
- Mangweth-Matzek, B., & Hoek, H. W. (2017). Epidemiology and treatment of eating disorders in men and women of middle and older age. In *Current Opinion in Psychiatry* (Vol. 30, Issue 6, pp. 446–451). Lippincott Williams and Wilkins. <https://doi.org/10.1097/YCO.0000000000000356>
- Mangweth-Matzek, B., Hoek, H. W., Rupp, C. I., Lackner-Seifert, K., Frey, N., Whitworth, A. B., Pope, H. G., & Kinzl, J. (2014). Prevalence of eating disorders in middle-aged women. *International Journal of Eating Disorders, 47*(3), 320–324. <https://doi.org/10.1002/eat.22232>
- Mangweth-Matzek, B., Kummer, K. K., & Hoek, H. W. (2023). Update on the epidemiology and treatment of eating disorders among older people. *Current Opinion in Psychiatry, 36*(6), 405–411. <https://doi.org/10.1097/YCO.0000000000000893>
- Mangweth-Matzek, B., Kummer, K. K., & Pope, H. G. (2016). Eating disorder symptoms in middle-aged and older men. *International Journal of Eating Disorders, 49*(10), 953–957. <https://doi.org/10.1002/eat.22550>
- Marshall, R. D., Latner, J. D., & Masuda, A. (2020). Internalized Weight Bias and Disordered Eating: The Mediating Role of Body Image Avoidance and Drive for Thinness. *Frontiers in Psychology, 10*. <https://doi.org/10.3389/fpsyg.2019.02999>
- Martínez-González, M. A., Gual, P., Lahortiga, F., Alonso, Y., Irala-Estévez, J. de, & Cervera, S. (2003). Parental Factors, Mass Media Influences, and the Onset of Eating Disorders in a Prospective Population-Based Cohort. *Pediatrics, 111*(2), 315–320. <https://doi.org/10.1542/peds.111.2.315>
- Masud, H., Ahmad, M. S., Jan, F. A., & Jamil, A. (2016). Relationship between parenting styles and academic performance of adolescents: mediating role of self-efficacy. *Asia Pacific Education Review, 17*(1), 121–131. <https://doi.org/10.1007/s12564-015-9413-6>
- Mathews, B., & Collin-Vézina, D. (2019). Child Sexual Abuse: Toward a Conceptual Model and Definition. *Trauma, Violence, and Abuse, 20*(2), 131–148. <https://doi.org/10.1177/1524838017738726>
- Mazzeo, S. E., & Espelage, D. L. (2002). Association between childhood physical and emotional abuse and disordered eating behaviors in female undergraduates: An investigation of the mediating role of

- alexithymia and depression. *Journal of Counseling Psychology*, 49(1), 86–100.
<https://doi.org/10.1037/0022-0167.49.1.86>
- Mendes, A. L., Marta-Simões, J., & Ferreira, C. (2017). How can the recall of early affiliative memories with peers influence on disordered eating behaviours? *Eating and Weight Disorders*, 22(1), 133–139. <https://doi.org/10.1007/s40519-016-0267-7>
- Meneguzzo, P., Cazzola, C., Castegnaro, R., Buscaglia, F., Bucci, E., Pillan, A., Garolla, A., Bonello, E., & Todisco, P. (2021). Associations Between Trauma, Early Maladaptive Schemas, Personality Traits, and Clinical Severity in Eating Disorder Patients: A Clinical Presentation and Mediation Analysis. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.661924>
- Menzel, J. E., Schaefer, L. M., Burke, N. L., Mayhew, L. L., Brannick, M. T., & Thompson, J. K. (2010). Appearance-related teasing, body dissatisfaction, and disordered eating: A meta-analysis. *Body Image*, 7(4), 261–270. <https://doi.org/10.1016/j.bodyim.2010.05.004>
- Mestermann, S., Arndt, M., Fasching, P. A., Beckmann, M. W., Kratz, O., Moll, G. H., Kornhuber, J., & Eichler, A. (2023). The Father's Part: Influences of Paternal Psychopathology and Parenting Behavior on Child and Adolescent Well-Being. *Healthcare (Switzerland)*, 11(15).
<https://doi.org/10.3390/healthcare11152119>
- Meyer, T. A., & Gast, J. (2008). The Effects of Peer Influence on Disordered Eating Behavior. In *The Journal of School Nursing* (Vol. 24, Issue 1). <http://jsn.sagepub.com>
- Midlarsky, E., Marotta, A. K., Pirutinsky, S., Morin, R. T., & McGowan, J. C. (2018). Psychological predictors of eating pathology in older adult women. *Journal of Women and Aging*, 30(2), 145–157.
<https://doi.org/10.1080/08952841.2017.1295665>
- Miklósi, M., Szabó, M., & Simon, L. (2017). The Role of Mindfulness in the Relationship Between Perceived Parenting, Early Maladaptive Schemata and Parental Sense of Competence. *Mindfulness*, 8(2), 471–480. <https://doi.org/10.1007/s12671-016-0619-4>
- Mills, C. B., & Carwile, A. M. (2009). The Good, the Bad, and the Borderline: Separating Teasing from Bullying. <https://doi-org.sire.ub.edu/10.1080/03634520902783666>, 58(2), 276–301.
<https://doi.org/10.1080/03634520902783666>
- Moghadam, F., Ebrahimi Moghadam, H., & Jahangir, P. (2021). The Relationship Between Perfectionism, Early Maladaptive Schemas, Attachment Styles, and Body Image Concern by the Mediating Role of Self-esteem in Cosmetic Surgery Applicants. *Journal of Client-Centered Nursing Care*, 7(1), 27–42. <https://doi.org/10.32598/jccnc.7.1.351.1>
- Mohr, S., Preisig, M., Fenton, B. T., & Ferrero, F. (1999). Validation of the French version of the parental bonding instrument in adults. *Personality and Individual Differences*, 26(6), 1065–1074.
[https://doi.org/10.1016/S0191-8869\(98\)00210-4](https://doi.org/10.1016/S0191-8869(98)00210-4)

- Mojallal, M., Simons, R. M., & Simons, J. S. (2021). Childhood maltreatment and adulthood proneness to shame and guilt: The mediating role of maladaptive schemas. *Motivation and Emotion, 45*(2), 197–210. <https://doi.org/10.1007/s11031-021-09866-6>
- Monteleone, A. M., Ruzzi, V., Patriciello, G., Pellegrino, F., Cascino, G., Castellini, G., Steardo, L., Monteleone, P., & Maj, M. (2020). Parental bonding, childhood maltreatment and eating disorder psychopathology: an investigation of their interactions. *Eating and Weight Disorders, 25*(3), 577–589. <https://doi.org/10.1007/s40519-019-00649-0>
- Montoya, Y. L., Quenaya, A., & Mayta-Tristán, P. (2015). Mass media influence and risk of developing eating disorders in female students from Lima, Peru. *Archivos Argentinos de Pediatría, 113*(6), 519–525. <https://doi.org/10.5546/aap.2015.eng.519>
- Moore, S. M., Welsh, M. C., & Peterson, E. (2020). History of Childhood Maltreatment: Associations with Aggression and College Outcomes. *Journal of Aggression, Maltreatment and Trauma, 29*(1), 111–128. <https://doi.org/10.1080/10926771.2019.1637989>
- Moskowitz, L., & Weiselberg, E. (2017). Anorexia Nervosa/Atypical Anorexia Nervosa. *Current Problems in Pediatric and Adolescent Health Care, 47*(4), 70–84. <https://doi.org/10.1016/j.cppeds.2017.02.003>
- Mounts, N. S., & Allen, C. (2019). Parenting Styles and Practices. In *The Oxford Handbook of Parenting and Moral Development* (pp. 40–56). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190638696.013.4>
- Muhammad, N. A., Shamsuddin, K., Omar, K., Shah, S. A., & Mohd Amin, R. (2014). Validation of the Malay Version of the Parental Bonding Instrument among Malaysian Youths Using Exploratory Factor Analysis. *The Malaysian Journal of Medical Sciences : MJMS, 21*(5), 51–59. <http://www.ncbi.nlm.nih.gov/pubmed/25977634>
- Murphy, E., Brewin, C. R., & Silka, L. (1997). The assessment of parenting using the Parental Bonding Instrument: two or three factors? *Psychological Medicine, 27*(2), 333–342. <https://doi.org/10.1017/S0033291796004606>
- Murphy, E., Wickramaratne, P., & Weissman, M. (2010). The stability of parental bonding reports: A 20-year follow-up. *Journal of Affective Disorders, 125*(1–3), 307–315. <https://doi.org/10.1016/j.jad.2010.01.003>
- Muwanguzi, M., Kaggwa, M. M., Najjuka, S. M., Mamun, M. A., Arinaitwe, I., Kajjimu, J., Nduhuura, E., & Ashaba, S. (2023). Exploring adverse childhood experiences (ACEs) among Ugandan university students: its associations with academic performance, depression, and suicidal ideations. *BMC Psychology, 11*(1), 11. <https://doi.org/10.1186/s40359-023-01044-2>

- Ngai, S. S. Y. (2015). Parental bonding and character strengths among Chinese adolescents in Hong Kong. *International Journal of Adolescence and Youth*, 20(3), 317–333.
<https://doi.org/10.1080/02673843.2015.1007879>
- Ngai, S. S. yum, Cheung, C. kiu, Xie, L., Ng, Y. hang, Ngai, H. lam, Liu, Y., & Ho, J. C. min. (2018). Psychometric Properties of the Parental Bonding Instrument: Data from a Chinese Adolescent Sample in Hong Kong. *Journal of Child and Family Studies*, 27(7), 2112–2124.
<https://doi.org/10.1007/s10826-018-1058-8>
- Nicol, A., Mak, A. S., Murray, K., & Kavanagh, P. S. (2021). Early maladaptive schemas in young people who self-injure. *Journal of Clinical Psychology*, 77(7), 1745–1762.
<https://doi.org/10.1002/jclp.23172>
- Nitzl, C., Roldán, J. L., Cepeda Carrión, G. A., & Jun Hwa, C. (2021, October 28). *PLS2022 Prelude #3: Mediation, moderation, and conditional mediation analysis in PLS-SEM*. SmartPLS YouTube Channel. <https://www.youtube.com/watch?v=YdwFNIOYWxc>
- Nitzl, C., Roldan, J. L., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling. *Industrial Management & Data Systems*, 116(9), 1849–1864. <https://doi.org/10.1108/IMDS-07-2015-0302>
- Nunes, F., Mota, C. P., & Guillén-Riquelme, A. (2023). Parenting styles and suicidal ideation of adolescents: The moderating role of social skills. *Revista Iberoamericana de Psicología y Salud*, 14(1), 18. <https://doi.org/10.23923/j.rips.2023.01.062>
- Obeid, N., Flament, M. F., Buchholz, A., Henderson, K. A., Schubert, N., Tasca, G., Thai, H., & Goldfield, G. (2022). Examining Shared Pathways for Eating Disorders and Obesity in a Community Sample of Adolescents: The REAL Study. *Frontiers in Psychology*, 13.
<https://doi.org/10.3389/fpsyg.2022.805596>
- O'Brien, J. R., Loi, E. C., Byrne, M. L., Zalewski, M., & Casement, M. D. (2023). The Link Between Positive and Negative Parenting Behaviors and Child Inflammation: A Systematic Review. *Child Psychiatry and Human Development*, 54(1), 51–65. <https://doi.org/10.1007/s10578-021-01224-4>
- O'Loughlen, E., Galligan, R., & Grant, S. (2023). Childhood maltreatment, shame, psychological distress, and binge eating: testing a serial mediational model. *Journal of Eating Disorders*, 11(1).
<https://doi.org/10.1186/s40337-023-00819-7>
- Olvera, N., McCarley, K., Matthews-Ewald, M. R., Fisher, F., Jones, M., & Flynn, E. G. (2017). Pathways for Disordered Eating Behaviors in Minority Girls. *The Journal of Early Adolescence*, 37(3), 367–386. <https://doi.org/10.1177/0272431615609155>
- Ostovar, S., Bagheri, R., Griffiths, M. D., & Mohd Hashima, I. H. (2021). Internet addiction and maladaptive schemas: The potential role of disconnection/rejection and impaired

- autonomy/performance. *Clinical Psychology and Psychotherapy*, 28(6), 1509–1524.
<https://doi.org/10.1002/cpp.2581>
- Ouyang, Y., Wang, K., Zhang, T., Peng, L., Song, G., & Luo, J. (2020). The Influence of Sports Participation on Body Image, Self-Efficacy, and Self-Esteem in College Students. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.03039>
- Palmeroni, N., Luyckx, K., Verschueren, M., & Claes, L. (2020). Body dissatisfaction as a mediator between identity formation and eating disorder symptomatology in adolescents and emerging adults. *Psychologica Belgica*, 60(1), 328–346. <https://doi.org/10.5334/PB.564>
- Park, E., & Kim, W.-H. (2022). A Retrospective Literature Review of Eating Disorder Research (1990–2021): Application of Bibliometrics and Topical Trends. *International Journal of Environmental Research and Public Health*, 19(13), 7710. <https://doi.org/10.3390/ijerph19137710>
- Park, H., Coello, J. A., & Lau, A. S. (2014). Child Socialization Goals in East Asian versus Western Nations from 1989 to 2010: Evidence for Social Change in Parenting. *Parenting*, 14(2), 69–91. <https://doi.org/10.1080/15295192.2014.914345>
- Parker, G., Tupling, H., & Brown, L. B. (1979). A Parental Bonding Instrument. *British Journal of Medical Psychology*, 52(1), 1–10. <https://doi.org/10.1111/j.2044-8341.1979.tb02487.x>
- Patton, S. C., Beaujean, A. A., & Benedict, H. E. (2014). Parental bonds, attachment anxiety, media susceptibility, and body dissatisfaction: A mediation model. *Developmental Psychology*, 50(8), 2124–2133. <https://doi.org/10.1037/a0037111>
- Pedram, P., Patten, S. B., Bulloch, A. G. M., Williams, J. V. A., & Dimitropoulos, G. (2021). Self-Reported Lifetime History of Eating Disorders and Mortality in the General Population: A Canadian Population Survey with Record Linkage. *Nutrients*, 13(10), 3333. <https://doi.org/10.3390/nu13103333>
- Peláez-Fernández, M. A., Labrador, F. J., & Raich, R. M. (2012). Validation of Eating Disorder Examination Questionnaire (EDE-Q) –Spanish Version– for Screening Eating Disorders. *The Spanish Journal of Psychology*, 15(2), 817–824. https://doi.org/10.5209/rev_sjop.2012.v15.n2.38893
- Peláez-Fernández, M. A., Labrador, F. J., & Raich, R. M. (2013). Datos normativos de la versión española del eating disorders examination questionnaire (S-EDE-Q). *Psicothema*, 25(1), 107–114. <https://doi.org/10.7334/psicothema2012.18>
- Pelcovitz, D., Pelcovitz, M., Sunday, S., Labrunad, V., Lehrman, D., Kline, M., Salzingerg, S., & Kaplan, S. (2017). Academic Achievement in Young Adults with a History of Adolescent Physical Abuse. *Adolescent Psychiatry*, 7(4), 286–299. <https://doi.org/10.2174/2210676608666180222124009>

- Peleg, O., Tzischinsky, O., & Spivak-Lavi, Z. (2021). Depression and social anxiety mediate the relationship between parenting styles and risk of eating disorders: A study among Arab adolescents. *International Journal of Psychology, 56*(6), 853–864. <https://doi.org/10.1002/ijop.12787>
- Pellerone, M., Ramaci, T., Granà, R., & Craparo, G. (2017b). Identity development, parenting styles, body uneasiness, and disgust toward food. A perspective of integration and research. *Clinical Neuropsychiatry, 14*(4), 275–286. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85029656900&partnerID=40&md5=6bc2ed72bb0d83b7a37a093e18b9f622>
- Peng, B., Hu, N., Yu, H., Xiao, H., & Luo, J. (2021). Parenting Style and Adolescent Mental Health: The Chain Mediating Effects of Self-Esteem and Psychological Inflexibility. *Frontiers in Psychology, 12*. <https://doi.org/10.3389/fpsyg.2021.738170>
- Pengpid, S., & Peltzer, K. (2018). Risk of disordered eating attitudes and its relation to mental health among university students in ASEAN. *Eating and Weight Disorders, 23*(3), 349–355. <https://doi.org/10.1007/s40519-018-0507-0>
- Pennesi, J. L., & Wade, T. D. (2016). A systematic review of the existing models of disordered eating: Do they inform the development of effective interventions? *Clinical Psychology Review, 43*, 175–192. <https://doi.org/10.1016/j.cpr.2015.12.004>
- Peterson, C. B., Pisetsky, E. M., & Berg, K. C. (2017). Bulimia Nervosa. In *Encyclopedia of Feeding and Eating Disorders* (pp. 106–108). Springer Singapore.
- Pinquart, M., & Kauser, R. (2018). Do the associations of parenting styles with behavior problems and academic achievement vary by culture? Results from a meta-analysis. *Cultural Diversity and Ethnic Minority Psychology, 24*(1), 75–100. <https://doi.org/10.1037/cdp0000149>
- Pinquart, M., & Kauser, R. (2018). Supplemental Material for Do the Associations of Parenting Styles with Behavior Problems and Academic Achievement Vary by Culture? Results From a Meta-Analysis. *Cultural Diversity and Ethnic Minority Psychology, 24*(1), 75–100. <https://doi.org/10.1037/cdp0000149.supp>
- Plaza, A., Torres, A., Martin-Santos, R., Gelabert, E., Imaz, M. L., Navarro, P., Bremner, J. D., Valdes, M., & Garcia-Esteve, L. (2011). Validation and Test-Retest Reliability of Early Trauma Inventory in Spanish Postpartum Women. *Journal of Nervous & Mental Disease, 199*(4), 280–285. <https://doi.org/10.1097/NMD.0b013e31821245b9>
- Porche, M. V., Fortuna, L. R., Lin, J., & Alegria, M. (2011). Childhood Trauma and Psychiatric Disorders as Correlates of School Dropout in a National Sample of Young Adults. *Child Development, 82*(3), 982–998. <https://doi.org/10.1111/j.1467-8624.2010.01534.x>

- Power, T. G. (2013). Parenting dimensions and styles: A brief history and recommendations for future research. In *Childhood Obesity* (Vol. 9, Issue SUPPL.1, p. S-14). Mary Ann Liebert, Inc. <https://doi.org/10.1089/chi.2013.0034>
- Preti, A., Incani, E., Camboni, M. V., Petretto, D. R., & Masala, C. (2006). Sexual abuse and eating disorder symptoms: the mediator role of bodily dissatisfaction. *Comprehensive Psychiatry*, *47*(6), 475–481. <https://doi.org/10.1016/j.comppsy.2006.03.004>
- Prnjak, K., Jukic, I., Mitchison, D., Griffiths, S., & Hay, P. (2022). Body image as a multidimensional concept: A systematic review of body image facets in eating disorders and muscle dysmorphia. *Body Image*, *42*, 347–360. <https://doi.org/10.1016/j.bodyim.2022.07.006>
- Puhl, R. M., Wall, M. M., Chen, C., Bryn Austin, S., Eisenberg, M. E., & Neumark-Sztainer, D. (2017). Experiences of weight teasing in adolescence and weight-related outcomes in adulthood: A 15-year longitudinal study. *Preventive Medicine*, *100*, 173–179. <https://doi.org/10.1016/j.ypmed.2017.04.023>
- Qadir, F., Stewart, R., Khan, M., & Prince, M. (2005). The validity of the Parental Bonding Instrument as a measure of maternal bonding among young Pakistani women. *Social Psychiatry and Psychiatric Epidemiology*, *40*(4), 276–282. <https://doi.org/10.1007/s00127-005-0887-0>
- Qian, J., Wu, Y., Liu, F., Zhu, Y., Jin, H., Zhang, H., Wan, Y., Li, C., & Yu, D. (2022). An update on the prevalence of eating disorders in the general population: a systematic review and meta-analysis. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, *27*(2), 415–428. <https://doi.org/10.1007/s40519-021-01162-z>
- Qu, G., Liu, H., Han, T., Zhang, H., Ma, S., Sun, L., Qin, Q., Chen, M., Zhou, X., & Sun, Y. (2023). Association between adverse childhood experiences and sleep quality, emotional and behavioral problems and academic achievement of children and adolescents. *European Child & Adolescent Psychiatry*. <https://doi.org/10.1007/s00787-023-02185-w>
- Rafaeli, E., Bernstein, D. P., & Young, J. (2011). Schema therapy: Distinctive features. In *Schema therapy: Distinctive features*. Routledge/Taylor & Francis Group.
- Reas, D. L., & Stedal, K. (2015). Eating disorders in men aged midlife and beyond. In *Maturitas* (Vol. 81, Issue 2, pp. 248–255). Elsevier Ireland Ltd. <https://doi.org/10.1016/j.maturitas.2015.03.004>
- Reddy, S. D., & Crowther, J. H. (2007). Teasing, acculturation, and culture conflict: Psychosocial correlates of body image and eating attitudes among South Asian women. *Cultural Diversity and Ethnic Minority Psychology*, *13*(1), 45–53. <https://doi.org/10.1037/1099-9809.13.1.45>
- Reina, S. A., Shomaker, L. B., Mooreville, M., Courville, A. B., Brady, S. M., Olsen, C., Yanovski, S. Z., Tanofsky-Kraff, M., & Yanovski, J. A. (2013). Sociocultural pressures and adolescent eating in the absence of hunger. *Body Image*, *10*(2), 182–190. <https://doi.org/10.1016/j.bodyim.2012.12.004>

- Renner, F., Lobbestael, J., Peeters, F., Arntz, A., & Huibers, M. (2012). Early maladaptive schemas in depressed patients: Stability and relation with depressive symptoms over the course of treatment. *Journal of Affective Disorders, 136*(3), 581–590. <https://doi.org/10.1016/J.JAD.2011.10.027>
- Riany, Y. E., Haslam, D. M., & Sanders, M. (2022). Parental Mood, Parenting Style and Child Emotional and Behavioural Adjustment: Australia-Indonesia Cross-Cultural Study. *Journal of Child and Family Studies, 31*(9), 2331–2343. <https://doi.org/10.1007/s10826-021-02137-5>
- Ringle, C. M., Wende, S., & Becker, J.-M. (2022). *SmartPLS 4*. <https://www.smartpls.com>
- Rodgers, R. F., Simone, M., Franko, D. L., Eisenberg, M. E., Loth, K., & Neumark-Sztainer, D. (2021). The longitudinal relationship between family and peer teasing in young adulthood and later unhealthy weight control behaviors: The mediating role of body image. *International Journal of Eating Disorders, 54*(5), 831–840. <https://doi.org/10.1002/eat.23492>
- Rodrigues, P. M., Marques, D. R., & Gomes, A. A. (2019). Differences in Early Maladaptive Schemas between Young Adults Displaying Poor Versus Good Sleep Quality. *Psychiatric Quarterly, 90*(4), 733–746. <https://doi.org/10.1007/s11126-019-09662-z>
- Rojo-Moreno, L., Rubio, T., Plumed, J., Barberá, M., Serrano, M., Gimeno, N., Conesa, L., Ruiz, E., Rojo-Bofill, L., Beato, L., & Livianos, L. (2013). Teasing and Disordered Eating Behaviors in Spanish Adolescents. *Eating Disorders, 21*(1), 53–69. <https://doi.org/10.1080/10640266.2013.741988>
- Romano, K. A., Lipson, S. K., Beccia, A. L., Quatromoni, P. A., Gordon, A. R., & Murgueitio, J. (2022). Changes in the prevalence and sociodemographic correlates of eating disorder symptoms from 2013 to 2020 among a large national sample of U.S. young adults: A repeated cross-sectional study. *International Journal of Eating Disorders, 55*(6), 776–789. <https://doi.org/10.1002/eat.23709>
- Rosenbaum, D. L., & Bernstein, M. J. (2022). Evaluating the relationships between sexual orientation, weight-related teasing, weight bias internalization, and binge eating. *Psychology of Sexual Orientation and Gender Diversity. https://doi.org/10.1037/sgd0000576*
- Rubin, A. G., Schvey, N. A., Shank, L. M., Altman, D. R., Swanson, T. N., Ramirez, E., Moore, N. A., Jaramillo, M., Ramirez, S., Davis, E. K., Broadney, M. M., LeMay-Russell, S., Byrne, M. E., Parker, M. K., Brady, S. M., Kelly, N. R., Tanofsky-Kraff, M., & Yanovski, J. A. (2021). Associations between weight-based teasing and disordered eating behaviors among youth. *Eating Behaviors, 41*, 101504. <https://doi.org/10.1016/j.eatbeh.2021.101504>
- Rudakov, V., & Roshchin, S. (2019). The impact of student academic achievement on graduate salaries: the case of a leading Russian university. *Journal of Education and Work, 32*(2), 156–180. <https://doi.org/10.1080/13639080.2019.1617839>

- Sahithya, B. R., Manohari, S. M., & Vijaya, R. (2019). Parenting styles and its impact on children—a cross cultural review with a focus on India. *Mental Health, Religion and Culture*, 22(4), 357–383. <https://doi.org/10.1080/13674676.2019.1594178>
- Sahlan, R. N., Akoury, L. M., & Taravatrooy, F. (2020). Validation of a Farsi version of the Sociocultural Attitudes Towards Appearance Questionnaire-4 (F-SATAQ-4) in Iranian men and women. *Eating Behaviors*, 101438. <https://doi.org/https://doi.org/10.1016/j.eatbeh.2020.101438>
- Salami, T. K., Carter, S. E., Cordova, B., Flowers, K. C., & Walker, R. L. (2019). The Influence of Race-Related Stress on Eating Pathology: The Mediating Role of Depression and Moderating Role of Cultural Worldview Among Black American Women. *Journal of Black Psychology*, 45(6–7), 571–598. <https://doi.org/10.1177/0095798419887632>
- Salari, S., Shaygan, M., & Setoodeh, G. (2022). The mediating role of maladaptive cognitive schemas regarding the relationship between parenting styles and chronic pain in adolescents: a structural equation modelling approach. *Child and Adolescent Psychiatry and Mental Health*, 16(1). <https://doi.org/10.1186/s13034-022-00496-5>
- Sanchez-Ruiz, M. J., El-Jor, C., Abi Kharma, J., Bassil, M., & Zeeni, N. (2017). Personality, emotion-related variables, and media pressure predict eating disorders via disordered eating in Lebanese university students. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity* 2017 24:2, 24(2), 313–322. <https://doi.org/10.1007/S40519-017-0387-8>
- Sanjuán Suárez, P., Pérez García, A. M., & Bermúdez Moreno, J. (2000). Escala de autoeficacia general: Datos psicométricos de la adaptación para población española. *Psicothema*, 12(Suppl2), 509–513. <https://reunido.uniovi.es/index.php/PST/article/view/7741/7605>
- Saritas-Atalar, D., & Altan-Atalay, A. (2020). Differential roles of early maladaptive schema domains on the link between perceived parenting behaviors and depression, anxiety, and anger. *Current Psychology*, 39(4), 1466–1475. <https://doi.org/10.1007/s12144-018-9852-4>
- Sato, M., Okada, T., Morikawa, M., Nakamura, Y., Yamauchi, A., Ando, M., & Ozaki, N. (2021). Validation and factor analysis of the parental bonding instrument in Japanese pregnant women. *Scientific Reports*, 11(1), 13759. <https://doi.org/10.1038/s41598-021-93146-3>
- Schaefer, L. M., Burke, N. L., Calogero, R. M., Menzel, J. E., Krawczyk, R., & Thompson, J. K. (2018). Self-objectification, body shame, and disordered eating: Testing a core mediational model of objectification theory among White, Black, and Hispanic women. *Body Image*, 24, 5–12. <https://doi.org/10.1016/j.bodyim.2017.10.005>
- Schaefer, L. M., Burke, N. L., Thompson, J. K., Dedrick, R. F., Heinberg, L. J., Calogero, R. M., Bardone-Cone, A. M., Higgins, M. K., Frederick, D. A., Kelly, M., Anderson, D. A., Schaumberg, K., Nerini, A., Stefanile, C., Dittmar, H., Clark, E., Adams, Z., Macwana, S., Klump, K. L., ...

- Swami, V. (2015). Development and validation of the Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4). *Psychological Assessment*, 27(1), 54–67.
<https://doi.org/10.1037/a0037917>
- Schaefer, M. K., & Blodgett Salafia, E. H. (2014). The connection of teasing by parents, siblings, and peers with girls' body dissatisfaction and boys' drive for muscularity: The role of social comparison as a mediator. *Eating Behaviors*, 15(4), 599–608. <https://doi.org/10.1016/j.eatbeh.2014.08.018>
- Scheiber, R., Diehl, S., & Karmasin, M. (2023). Socio-cultural power of social media on orthorexia nervosa: An empirical investigation on the mediating role of thin-ideal and muscular internalization, appearance comparison, and body dissatisfaction. *Appetite*, 185, 106522.
<https://doi.org/10.1016/j.appet.2023.106522>
- Schönfeld, P., Brailovskaia, J., Zhang, X. C., & Margraf, J. (2019). Self-Efficacy as a Mechanism Linking Daily Stress to Mental Health in Students: A Three-Wave Cross-Lagged Study. *Psychological Reports*, 122(6), 2074–2095. <https://doi.org/10.1177/0033294118787496>
- Schultz, D. P., & Schultz, S. E. (2008). *Theories of Personality*. Cengage Learning.
https://books.google.es/books?id=queaQO4Q6_AC
- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston. In *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35–37). NFER-NELSON.
- Scime, M., Cook-Cottone, C., Kane, L., & Watson, T. (2006). Group prevention of eating disorders with fifth-grade females: Impact on body dissatisfaction, drive for thinness, and media influence. *Eating Disorders*, 14(2), 143–155. <https://doi.org/10.1080/10640260500403881>
- See Mey, L., Khairudin, R., Tengku Muda, T. E. A., Abdullah @ Mohd Nor, H., & Kamaluddin, M. R. (2022). The Mediating Role of Forgiveness and Self-Efficacy in the Relationship Between Childhood Maltreatment and Treatment Motivation Among Malaysian Male Drug Addicts. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.816373>
- Selland, C. A., Huber-Johnson, E. C., Bowne, M., & Meendering, J. R. (2021). Influence of Parenting Style on Body Mass Index, Physical Activity, and Sedentary Time. *Global Pediatric Health*, 8.
<https://doi.org/10.1177/2333794X211045528>
- Serra, R., Kiekens, G., Vanderlinden, J., Vrieze, E., Auerbach, R. P., Benjet, C., Claes, L., Cuijpers, P., Demyttenaere, K., Ebert, D. D., Tarsitani, L., Green, J. G., Kessler, R. C., Nock, M. K., Mortier, P., & Bruffaerts, R. (2020). Binge eating and purging in first-year college students: Prevalence, psychiatric comorbidity, and academic performance. *International Journal of Eating Disorders*, 53(3), 339–348. <https://doi.org/10.1002/eat.23211>

- Shekriladze, I., Javakhishvili, N., & Tchanturia, K. (2019). Culture Change and Eating Patterns: A Study of Georgian Women. *Frontiers in Psychiatry, 10*. <https://doi.org/10.3389/fpsy.2019.00619>
- Shojaati, A., Kalantari, M., & Mulavi, H. (2021). Do emotional abuse and personality traits predict early maladaptive schemas and social anxiety. *Early Child Development and Care, 191*(3), 389–402. <https://doi.org/10.1080/03004430.2019.1621860>
- Shute, R., Maud, M., & McLachlan, A. (2019). The relationship of recalled adverse parenting styles with maladaptive schemas, trait anger, and symptoms of depression and anxiety. *Journal of Affective Disorders, 259*, 337–348. <https://doi.org/10.1016/j.jad.2019.08.048>
- Silén, Y., & Keski-Rahkonen, A. (2022). Worldwide prevalence of DSM-5 eating disorders among young people. *Current Opinion in Psychiatry, 35*(6), 362–371. <https://doi.org/10.1097/YCO.0000000000000818>
- Simpson, S., & Smith, E. (2019). *Schema Therapy for Eating Disorders: Theory and Practice for Individual and Group Settings*. Routledge.
- Singelis, T. M., Triandis, H. C., Bhawuk, D. P. S., & Gelfand, M. J. (1995). Horizontal and Vertical Dimensions of Individualism and Collectivism: A Theoretical and Measurement Refinement. *Cross-Cultural Research, 29*(3), 240–275. <https://doi.org/10.1177/106939719502900302>
- Siqueira-Campos, V. M., De Deus, M. S. C., Carneiro, L. A., Naghettini, A. V., Pereira, M. A. D., De Deus, J. M., & Conde, D. M. (2021). Dysfunctional Parenting Styles Are Associated with Mental Disorders and Low Self-Efficacy Beliefs in Brazilian Undergraduate Medical Students. *BioMed Research International, 2021*. <https://doi.org/10.1155/2021/6372922>
- Slade, E. P., & Wissow, L. S. (2007). The influence of childhood maltreatment on adolescents' academic performance. *Economics of Education Review, 26*(5), 604–614. <https://doi.org/10.1016/j.econedurev.2006.10.003>
- Slater, A., & Tiggemann, M. (2016). The influence of maternal self-objectification, materialism and parenting style on potentially sexualized 'grown up' behaviours and appearance concerns in 5–8 year old girls. *Eating Behaviors, 22*, 113–118. <https://doi.org/10.1016/j.eatbeh.2016.05.002>
- Smolak, L., & Levine, M. P. (2015). Body Image, Disordered Eating, and Eating Disorders. In *The Wiley Handbook of Eating Disorders* (pp. 1–10). Wiley. <https://doi.org/10.1002/9781118574089.ch1>
- Soffer, N., Gilboa-schechtman, E., & Shahar, G. (2008). The relationship of childhood emotional abuse and neglect to depressive vulnerability and low self-efficacy. *International Journal of Cognitive Therapy, 1*(2), 151–162. <https://doi.org/10.1521/ijct.2008.1.2.151>
- Solmi, M., Radua, J., Stubbs, B., Ricca, V., Moretti, D., Busatta, D., Carvalho, A. F., Dragioti, E., Favaro, A., Monteleone, A. M., Shin, J. Il, Fusar-Poli, P., & Castellini, G. (2021). Risk factors for eating

- disorders: an umbrella review of published meta-analyses. *Brazilian Journal of Psychiatry*, 43(3), 314–323. <https://doi.org/10.1590/1516-4446-2020-1099>
- Soon, J. J., Lee, A. S.-H., Lim, H.-E., Idris, I., & Eng, W. Y.-K. (2020). Cubicles or corner offices? Effects of academic performance on university graduates' employment likelihood and salary. *Studies in Higher Education*, 45(6), 1233–1248. <https://doi.org/10.1080/03075079.2019.1590689>
- Soper, D. S. (2022). *A-priori Sample Size Calculator for Structural Equation Models [Software]*.
- Stavroulaki, E., Li, M., & Gupta, J. (2021). Perceived parenting styles, academic achievement, and life satisfaction of college students: the mediating role of motivation orientation. *European Journal of Psychology of Education*, 36(3), 693–717. <https://doi.org/10.1007/s10212-020-00493-2>
- Stice, E., Gau, J. M., Rohde, P., & Shaw, H. (2017). Risk factors that predict future onset of each DSM–5 eating disorder: Predictive specificity in high-risk adolescent females. *Journal of Abnormal Psychology*, 126(1), 38–51. <https://doi.org/10.1037/abn0000219>
- Sucuoğlu, E. (2018). Economic status, self-efficacy and academic achievement: the case study of undergraduate students. *Quality and Quantity*, 52, 851–861. <https://doi.org/10.1007/s11135-018-0692-y>
- Suzuki, H. (2011). The Parental Bonding Instrument: A Four-Factor Structure Model in a Japanese College Sample. *The Open Family Studies Journal*, 4(1), 89–94. <https://doi.org/10.2174/1874922401104010089>
- Swanson, H., Power, K., Collin, P., Deas, S., Paterson, G., Grierson, D., Yellowlees, A., Park, K., & Taylor, L. (2010). The relationship between parental bonding, social problem solving and eating pathology in an anorexic inpatient sample. *European Eating Disorders Review*, 18(1), 22–32. <https://doi.org/10.1002/erv.967>
- Swartz, L. (1985). Anorexia nervosa as a culture-bound syndrome. *Social Science & Medicine*, 20(7), 725–730. [https://doi.org/10.1016/0277-9536\(85\)90062-0](https://doi.org/10.1016/0277-9536(85)90062-0)
- Talmon, A., & Ginzburg, K. (2018). “Body self” in the shadow of childhood sexual abuse: The long-term implications of sexual abuse for male and female adult survivors. *Child Abuse & Neglect*, 76, 416–425. <https://doi.org/10.1016/j.chiabu.2017.12.004>
- Tasca, G. A., Ritchie, K., Zachariades, F., Proulx, G., Trinneer, A., Balfour, L., Demidenko, N., Hayden, G., Wong, A., & Bissada, H. (2013). Attachment insecurity mediates the relationship between childhood trauma and eating disorder psychopathology in a clinical sample: A structural equation model. *Child Abuse and Neglect*, 37(11), 926–933. <https://doi.org/10.1016/j.chiabu.2013.03.004>
- Taylor, A., Wilson, C., Slater, A., & Mohr, P. (2012). Self-esteem and body dissatisfaction in young children: Associations with weight and perceived parenting style. *Clinical Psychologist*, 16(1), 25–35. <https://doi.org/10.1111/j.1742-9552.2011.00038.x>

- Tetley, A., Moghaddam, N. G., Dawson, D. L., & Rennoldson, M. (2014). Parental bonding and eating disorders: A systematic review. *Eating Behaviors, 15*(1), 49–59.
<https://doi.org/10.1016/j.eatbeh.2013.10.008>
- Thompson, J. K., Cattarin, J., Fowler, B., & Fisher, E. (1995). The Perception of Teasing Scale (POTS): A Revision and Extension of the Physical Appearance Related Teasing Scale (PARTS). *Journal of Personality Assessment, 65*(1), 146–157. https://doi.org/10.1207/s15327752jpa6501_11
- Thompson, K. A., & Bardone-Cone, A. M. (2019). Disordered eating behaviors and attitudes and their correlates among a community sample of older women. *Eating Behaviors, 34*.
<https://doi.org/10.1016/j.eatbeh.2019.05.004>
- Tognin, S., Catalan, A., Kempton, M. J., Nelson, B., McGorry, P., Riecher-Rössler, A., Bressan, R., Barrantes-Vidal, N., Krebs, M.-O., Nordentoft, M., Ruhrmann, S., Sachs, G., Rutten, B. P. F., van Os, J., de Haan, L., van der Gaag, M., McGuire, P., & Valmaggia, L. R. (2023). Impact of adverse childhood experiences on educational achievements in young people at clinical high risk of developing psychosis. *European Psychiatry, 66*(1), e16. <https://doi.org/10.1192/j.eurpsy.2022.2351>
- Tomiyama, A. J., & Mann, T. (2008). Cultural Factors in Collegiate Eating Disorder Pathology: When Family Culture Clashes With Individual Culture. *Journal of American College Health, 57*(3), 309–314. <https://doi.org/10.3200/JACH.57.3.309-314>
- Torres, C., Otero, P., Bustamante, B., Blanco, V., Díaz, O., & Vázquez, F. L. (2017). Mental health problems and related factors in ecuadorian college students. *International Journal of Environmental Research and Public Health, 14*(5), 530. <https://doi.org/10.3390/ijerph14050530>
- Tort-Nasarre, G., Pollina Pocallet, M., & Artigues-Barberà, E. (2021). The Meaning and Factors That Influence the Concept of Body Image: Systematic Review and Meta-Ethnography from the Perspectives of Adolescents. *International Journal of Environmental Research and Public Health, 18*(3), 1140. <https://doi.org/10.3390/ijerph18031140>
- Tremblay, L., & Lariviere, M. (2009). The influence of puberty onset, Body Mass Index, and pressure to be thin on disordered eating behaviors in children and adolescents. *Eating Behaviors, 10*(2), 75–83. <https://doi.org/10.1016/j.eatbeh.2008.12.001>
- Treuer, T., Koperdák, M., Rózsa, S., & Füredi, J. (2005). The impact of physical and sexual abuse on body image in eating disorders. *European Eating Disorders Review, 13*(2), 106–111.
<https://doi.org/10.1002/erv.616>
- Triandis, H. C. (2001). Individualism-collectivism and personality. *Journal of Personality, 69*(6), 907–924. <https://doi.org/10.1111/1467-6494.696169>

- Triandis, H. C., Chen, X. P., & Chan, D. K.-S. (1998). Scenarios for the Measurement of Collectivism and Individualism. *Journal of Cross-Cultural Psychology, 29*(2), 275–289.
<https://doi.org/10.1177/0022022198292001>
- Triandis, H. C., & Gelfand, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology, 74*(1), 118–128.
<https://doi.org/10.1037/0022-3514.74.1.118>
- Triandis, H. C., McCusker, C., Betancourt, H., Iwao, S., Leung, K., Salazar, J. M., Setiadi, B., Sinha, J. B. P., Touzard, H., & Zaleski, Z. (1993). An Etic-Emic Analysis of Individualism and Collectivism. *Journal of Cross-Cultural Psychology, 24*(3), 366–383. <https://doi.org/10.1177/0022022193243006>
- Triandis, H. C., McCusker, C., & Hui, C. H. (1990). Multimethod probes of individualism and collectivism. *Journal of Personality and Social Psychology, 59*(5), 1006–1020.
<https://doi.org/10.1037/0022-3514.59.5.1006>
- Turner, E. A., Chandler, M., & Heffer, R. W. (2009). The Influence of Parenting Styles, Achievement Motivation, and Self-Efficacy on Academic Performance in College Students. *Journal of College Student Development, 50*(3), 337–346. <https://doi.org/10.1353/csd.0.0073>
- Turner, H. M., Rose, K. S., & Cooper, M. J. (2005). Parental bonding and eating disorder symptoms in adolescents: The meditating role of core beliefs. *Eating Behaviors, 6*(2), 113–118.
<https://doi.org/10.1016/j.eatbeh.2004.08.010>
- Tylka, T. L. (2004). The Relation Between Body Dissatisfaction and Eating Disorder Symptomatology: An Analysis of Moderating Variables. *Journal of Counseling Psychology, 51*(2), 178–191.
<https://doi.org/10.1037/0022-0167.51.2.178>
- Uchôa, F. N. M., Uchôa, N. M., Daniele, T. M. da C., Lustosa, R. P., Garrido, N. D., Deana, N. F., Aranha, Á. C. M., & Alves, N. (2019). Influence of the Mass Media and Body Dissatisfaction on the Risk in Adolescents of Developing Eating Disorders. *International Journal of Environmental Research and Public Health, 16*(9), 1508. <https://doi.org/10.3390/ijerph16091508>
- Udo, T., & Grilo, C. M. (2022). Epidemiology of eating disorders among US adults. *Current Opinion in Psychiatry, 35*(6), 372–378. <https://doi.org/10.1097/YCO.0000000000000814>
- Uji, M., Sakamoto, A., Adachi, K., & Kitamura, T. (2014). The Impact of Authoritative, Authoritarian, and Permissive Parenting Styles on Children’s Later Mental Health in Japan: Focusing on Parent and Child Gender. *Journal of Child and Family Studies, 23*(2), 293–302.
<https://doi.org/10.1007/s10826-013-9740-3>
- Uji, M., Tanaka, N., Shono, M., & Kitamura, T. (2006). Factorial structure of the Parental Bonding Instrument (PBI) in Japan: A study of cultural, developmental, and gender influences. *Child Psychiatry and Human Development, 37*(2), 115–132. <https://doi.org/10.1007/s10578-006-0027-4>

- Unoka, Z., & Vizin, G. (2017). To see in a mirror dimly. The looking glass self is self-shaming in borderline personality disorder. *Psychiatry Research*, 258, 322–329.
<https://doi.org/10.1016/j.psychres.2017.08.055>
- Van Eeden, A. E., Van Hoeken, D., & Hoek, H. W. (2021). Incidence, prevalence and mortality of anorexia nervosa and bulimia nervosa. *Current Opinion in Psychiatry*, 34(6), 515–524.
<https://doi.org/10.1097/YCO.0000000000000739>
- Van Vlierberghe, L., Braet, C., & Goossens, L. (2009). Dysfunctional schemas and eating pathology in overweight youth: A case-control study. *International Journal of Eating Disorders*, 42(5), 437–442.
<https://doi.org/10.1002/eat.20638>
- Vandereycken, W. (2002). History of anorexia nervosa and bulimia nervosa. In *Eating disorders and obesity: A comprehensive handbook* (2nd ed., pp. 151–154). Guilford Press New York.
- Vartanian, L. R., Hayward, L. E., Smyth, J. M., Paxton, S. J., & Touyz, S. W. (2018). Risk and resiliency factors related to body dissatisfaction and disordered eating: The identity disruption model. *International Journal of Eating Disorders*, 51(4), 322–330. <https://doi.org/10.1002/eat.22835>
- Waller, G., Meyer, C., Ohanian, V., Elliott, P., Dickson, C., & Sellings, J. (2001). The Psychopathology of Bulimic Women Who Report Childhood Sexual Abuse: The Mediating Role of Core Beliefs. *The Journal of Nervous and Mental Disease*, 189(10), 700–708.
https://journals.lww.com/jonmd/Abstract/2001/10000/The_Psychopathology_of_Bulimic_Women_Who_Report.7.aspx
- Wang, Y.-H., Wang, Y.-L., Misener, K., & Libben, M. (2023). Examining the effectiveness of cognitive bias modification for perfectionism in exploration of the mediating and moderating effects of body dissatisfaction and self-efficacy. *Current Psychology*, 42(2), 1635–1651.
<https://doi.org/10.1007/s12144-021-01550-9>
- Webb, H., & Schmidt, U. (2021). Facilitators and barriers to supporting young people with eating disorders during their transition to, and time at, university: An exploration of clinicians' perspectives. *European Eating Disorders Review*, 29(3), 443–457. <https://doi.org/10.1002/erv.2795>
- Weinberger-Litman, S. L., Latzer, Y., Litman, L., & Ozick, R. (2018). Extrinsic Religious Orientation and Disordered Eating Pathology Among Modern Orthodox Israeli Adolescents: The Mediating Role of Adherence to the Superwoman Ideal and Body Dissatisfaction. *Journal of Religion and Health*, 57(1), 209–222. <https://doi.org/10.1007/s10943-017-0443-8>
- Welch, E., Miller, J. L., Ghaderi, A., & Vaillancourt, T. (2009). Does perfectionism mediate or moderate the relation between body dissatisfaction and disordered eating attitudes and behaviors? *Eating Behaviors*, 10(3), 168–175. <https://doi.org/10.1016/j.eatbeh.2009.05.002>

- Welsh, M. C., Peterson, E., & Jameson, M. M. (2017). History of childhood maltreatment and college academic outcomes: Indirect effects of hot execution function. *Frontiers in Psychology*, 8(JUL). <https://doi.org/10.3389/fpsyg.2017.01091>
- Weymouth, L., & Howe, T. R. (2011). Emotional Abuse. In *Encyclopedia of Child Behavior and Development* (pp. 566–567). Springer US. https://doi.org/10.1007/978-0-387-79061-9_984
- Williams, T. L., & Gleaves, D. H. (2003). Childhood sexual abuse, body image, and disordered eating: A structural modeling analysis. *Journal of Trauma and Dissociation*, 4(4), 91–108. https://doi.org/10.1300/J229v04n04_07
- Wonderlich, S. A., Rosenfeldt, S., Crosby, R. D., Mitchell, J. E., Engel, S. G., Smyth, J., & Miltenberger, R. (2007). The effects of childhood trauma on daily mood lability and comorbid psychopathology in bulimia nervosa. *Journal of Traumatic Stress*, 20(1), 77–87. <https://doi.org/10.1002/jts.20184>
- Wonderlich, S., Crosby, R., Mitchell, J., Thompson, K., Redlin, J., Demuth, G., & Smyth, J. (2001). Pathways mediating sexual abuse and eating disturbance in children. *International Journal of Eating Disorders*, 29(3), 270–279. <https://doi.org/10.1002/eat.1018>
- Wright, A., & Pritchard, M. E. (2009). An examination of the relation of gender, mass media influence, and loneliness to disordered eating among college students. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, 14(2–3), e144–e147. <https://doi.org/10.1007/BF03327813>
- Wu, J., Liu, J., Li, S., Ma, H., & Wang, Y. (2020). Trends in the prevalence and disability-adjusted life years of eating disorders from 1990 to 2017: results from the Global Burden of Disease Study 2017. *Epidemiology and Psychiatric Sciences*, 29, e191. <https://doi.org/10.1017/S2045796020001055>
- Yaffe, Y., & Levental, O. (2023). Paternal and maternal parenting style and adolescents' physical activity motivation: indirect effects through parental physical activity related practices. *Current Psychology*. <https://doi.org/10.1007/s12144-023-04931-4>
- Yang, F., Qi, L., Liu, S., Hu, W., Cao, Q., Liu, Y., Tang, M., Lv, Z., Zhou, Z., & Yang, Y. (2022). Body Dissatisfaction and Disordered Eating Behaviors: The Mediation Role of Smartphone Addiction and Depression. *Nutrients*, 14(6). <https://doi.org/10.3390/nu14061281>
- Yanover, T., & Thompson, J. K. (2008). Eating problems, body image disturbances, and academic achievement: Preliminary evaluation of the eating and body image disturbances academic interference scale. *International Journal of Eating Disorders*, 41(2), 184–187. <https://doi.org/10.1002/eat.20483>
- Yanover, T., & Thompson, J. K. (2008). Self-reported interference with academic functioning and eating disordered symptoms: Associations with multiple dimensions of body image. *Body Image*, 5(3), 326–328. <https://doi.org/10.1016/j.bodyim.2008.03.008>

- Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). Schema therapy: A practitioner's guide. In *Schema therapy: A practitioner's guide*. Guilford Press. <https://psycnet.apa.org/record/2003-00629-000>
- Yuan, S., Weiser, D. A., & Fischer, J. L. (2016). Self-efficacy, parent–child relationships, and academic performance: a comparison of European American and Asian American college students. *Social Psychology of Education, 19*(2), 261–280. <https://doi.org/10.1007/s11218-015-9330-x>
- Zeigler-Hill, V., & Noser, A. (2015). Will I Ever Think I'm Thin Enough? A Moderated Mediation Study of Women's Contingent Self-Esteem, Body Image Discrepancies, and Disordered Eating. *Psychology of Women Quarterly, 39*(1), 109–118. <https://doi.org/10.1177/0361684313515841>
- Zhou, C., Yiu, W. Y. V., Wu, M. S., & Greenfield, P. M. (2018). Perception of Cross-Generational Differences in Child Behavior and Parent Socialization: A Mixed-Method Interview Study with Grandmothers in China. *Journal of Cross-Cultural Psychology, 49*(1), 62–81. <https://doi.org/10.1177/0022022117736029>
- Zhou, C., Yue, X. D., Zhang, X., Shanguan, F., & Zhang, X. Y. (2021). Self-efficacy and mental health problems during COVID-19 pandemic: A multiple mediation model based on the Health Belief Model. *Personality and Individual Differences, 179*, 110893. <https://doi.org/10.1016/j.paid.2021.110893>
- Zimmer-Gembeck, M. J., Webb, H. J., Kerin, J., Waters, A. M., & Farrell, L. J. (2021). Risk factors and temporal patterns of disordered eating differ in adolescent boys and girls: Testing gender-specific appearance anxiety models. *Development and Psychopathology, 33*(3), 856–867. <https://doi.org/10.1017/S0954579420000188>

Appendices

Appendix A

Newly Translated Spanish Version of the Parental Bonding Instrument

INSTRUCCIONES: Este cuestionario incluye una lista de algunas actitudes y conductas de los padres hasta los 16 años. Responda dentro del paréntesis en base a como usted recuerde a su padre-madre.

3 = Siempre
2 = Algunas veces
1 = Rara vez
0 = Nunca

	Padre	Madre
Hablaba conmigo con voz cálida y amigable	()	()
No me ayudaba tanto como yo lo necesitaba	()	()
Me dejaba hacer lo que a mí me gustaba	()	()
Parecía emocionalmente frío(a) conmigo	()	()
Parecía entender mis problemas y preocupaciones	()	()
Era cariñoso(a) conmigo	()	()
Le gustaba que tomara mis propias decisiones	()	()
No quería que yo creciera	()	()
Trataba de controlar todo lo que yo hacía	()	()
Invadía mi privacidad	()	()
Disfrutaba hablando conmigo	()	()
Frecuentemente me sonreía	()	()
Tendía a tratarme como a un bebé	()	()
Parecía que no entendía lo que yo quería o necesitaba	()	()
Me dejaba tomar mis propias decisiones	()	()
Me hacía sentir que no me quería	()	()
Podía hacerme sentir mejor cuando yo estaba disgustado	()	()
No hablaba mucho conmigo	()	()
Trataba de que yo dependiera de él o ella	()	()
Sentía que no me podía cuidar solo, si él o ella no estaban cerca	()	()
Me daba tanta libertad como yo quería	()	()
Me dejaba salir tan a menudo como yo quisiese	()	()
Fue sobre protector(a) conmigo	()	()
No me alababa	()	()
Me dejaba vestir como yo quería	()	()

Appendix B

Complete Spanish Survey Recruited in the Spanish Sample

Estimado(a) Participante,

Esta encuesta está siendo realizada por Zahra Zabolipour, estudiante de doctorado en la Facultad de Psicología de la Universidad de Barcelona. A continuación, se le presentarán unos cuestionarios con el propósito de investigar los factores efectivos en la aparición de problemas de alimentación y el impacto de estos problemas en el rendimiento académico de los estudiantes. Su participación será **anónima**, la información es **CONFIDENCIAL** y se utilizará sólo con **FINES ACADÉMICOS**. Por lo tanto, por favor sea honesto en sus respuestas. No hay respuestas buenas ni malas.

Para agradecerle, se le enviará un informe con los resultados del cuestionario que completó, al final de esta investigación.

Además, puede dejar de participar en esta investigación cuando lo desee. Si tiene alguna pregunta sobre esta investigación o quiere cancelar su participación, por favor envíe un correo electrónico a zzabolza7@alumnes.ub.edu.

Aceptación de participación: marque la casilla de abajo por favor

Entiendo lo que implica mi participación, soy consciente de que mi participación es **anónima y voluntaria**, y quiero participar en el estudio.

En primer lugar, responda las siguientes preguntas por favor:

¿Cuántos años tiene?

¿Con qué género se identifica? Mujer Hombre Otro

¿Qué estudia?

¿Qué estudios está cursando actualmente? Grado Máster Doctorado

¿Cuál es su nota media del grado o de los cursos de grado realizados, aproximadamente (**entre 0 y 10**)?

¿A qué etnia pertenece? Caucásico(a) Otro

¿Cuál es su **peso** actualmente en **kilogramo** (dé su mejor estimación)?

¿Cuál es su **altura** actualmente en **centímetro** (dé su mejor estimación)?

Cuestionario de Hábitos Alimentarios

Este cuestionario evalúa los hábitos y estilos de alimentación. Las siguientes preguntas se refieren al **ÚLTIMO MES**:

Cuántos días en los pasados 28 días	Ningún día	1-5 días	6-12 días	13-15 días	16-22 días	23-27 días	Todos los días
has intentado limitar deliberadamente la cantidad de comida que comes para que influya en tu silueta o peso?							
has pasado por períodos de 8 o más horas de vigilia sin comer nada para que influya en tu silueta o peso?							
has intentado evitar comer algunos alimentos que te gustan para que influya en tu silueta o peso?							
has intentado seguir reglas determinadas en tu alimentación destinadas a influir en tu silueta o peso; por ejemplo, limitar calorías, la cantidad total de ingesta, ¿o normas como cuánto o cuándo comer?							
has deseado que tu estómago esté vacío?							
has tenido un claro deseo de tener el vientre plano?							
pensar en alimentos o su contenido calórico ha interferido con tu capacidad de concentrarte en cosas en las que estás interesado como, por ejemplo, leer, ver la TV o seguir una conversación?							
pensar en la silueta o el peso ha interferido con tu capacidad de concentrarte en cosas en las que estás interesado, como, por ejemplo, leer, ver la TV o seguir una conversación?							
has tenido miedo de perder el control sobre la comida?							
has sentido un claro temor de engordar o de convertirte en obeso/a?							
te has sentido gordo/a?							
has sentido un fuerte deseo de perder peso?							

Lea las siguientes preguntas y escriba el número correspondiente:	
Durante los últimos 28 días , ¿cuántas VECES has sentido que has comido lo que para otras personas es una cantidad anormalmente grande de comida en esas circunstancias?	
¿ Durante cuántos de estos episodios de sobreingesta (la <u>pregunta anterior</u>) has tenido la sensación de perder el control sobre lo que comías?	
¿ Cuántos DIAS en los pasados 28 días has tenido episodios de atracones (en los que has comido una cantidad anormalmente grande de comida y has tenido la sensación de perder el control)?	
¿ Durante los últimos 28 días , cuántas VECES Te has provocado el vómito para controlar tu figura o tu peso?	
¿ Durante los últimos 28 días , cuántas VECES has tomado laxantes para controlar tu figura o tu peso?	
¿ Durante los últimos 28 días , cuántas VECES has realizado ejercicio enérgico para controlar tu figura o tu peso?	

Lea las siguientes preguntas y marque el respuesta correspondiente:

Tenga en cuenta que, para estas preguntas, la palabra “atracones” significa comer lo que otras personas consideran como una cantidad inusualmente grande de comida para las circunstancias, acompañada de una sensación de haber perdido el control sobre la comida.

¿Cuántos días en los pasados 28 días has comido en secreto (exceptuando atracones)?	Ningún día	1-5 días	6-12 días	13-15 días	16-22 días	23-27 días	Todos los días
¿Cuántos veces en los pasados 28 días te has sentido culpable después de comer por el efecto que pueda tener en tu silueta y peso (exceptuando atracones)?	Ninguna vez	Alguna vez	Menos de la mitad de las veces	La mitad de las veces	Más de la mitad de las veces	La mayoría de las veces	Siempre

Durante los últimos 28 días	0 (Nada en Anbosulo)	1	2	3	4	5	6 (Marcadamente)
¿en qué grado te ha preocupado que otra gente te vea comer?							
¿ha influido tu peso en cómo te has juzgado a ti mismo/a como persona?							
¿ha influido tu figura en cómo te has juzgado a ti mismo/a como persona?							
¿en qué medida te molestaría si tuvieras que pesarte una vez por semana (ni más ni menos)							
¿en qué grado has sentido insatisfacción por tu peso?							
¿en qué grado has sentido insatisfacción por tu figura?							
¿en qué grado te has sentido incómodo/a al ver tu cuerpo, por ejemplo, en el espejo, reflejado de un escaparate, cuando te desvistes o te duchas?							
¿en qué grado te has sentido incómodo/a cuando otros ven tu cuerpo, por ejemplo, en los vestuarios, nadando o llevando ropas ajustadas?							

Cuestionario de Esquemas

A continuación encontrará una lista de frases que una persona puede utilizar para describirse a sí misma. Por favor, lea cada frase y decida el grado de exactitud con que le describe. Cuando no esté seguro, basa su respuesta en lo que **emocionalmente sienta**. Algunas frases hacen referencia a las relaciones con sus padres o con sus parejas. Si alguna de las personas ha fallecido, por favor responda a esos ítems basándose en sus relaciones cuando estaban vivas. Si en la actualidad no tiene pareja, pero tuvo parejas en su pasado, por favor responda al ítem basándose en la relación de pareja más reciente y significativa.

	1 (Totalmente Falso)	2	3	4	5	6 (Me Describe Perfectamente)
La mayor parte de mi vida, no he tenido a nadie que me cuide, con quién compartir, o que se preocupe verdaderamente de las cosas que me ocurren.						
Me siento aferrado a las personas a las que estoy muy unido porque tengo miedo de que me abandonen.						
Presiento que la gente se aprovechará de mí.						
No me aceptan en ningún lugar.						
Ningún hombre/mujer que yo desee podría amarme cuando viese mis defectos.						
Casi nada de lo que hago en el trabajo (o en la escuela) está tan bien hecho como lo que otras personas pueden hacer.						
No me siento capaz de arreglármelas por mí mismo en las cosas de cada día.						
No puedo escapar a la sensación de que algo malo va a ocurrir.						
No he sido capaz de independizarme de mis padres, en la medida en que las otras personas de mi edad parecen haberlo hecho.						
Pienso que, si hago lo que quiero, sólo me encontraré problemas.						
Soy el que normalmente acabo cuidando de las personas cercanas a mí.						
Soy demasiado tímido para expresar sentimientos positivos hacia los demás (p. ej., afecto, preocupación...).						
Tengo que ser el mejor en la mayoría de las cosas que hago; no puedo aceptar ser el segundo mejor.						

	1 (Totalmente Falso)	2	3	4	5	6 (Me Describe Perfectamente)
Me es muy difícil aceptar un "no" como respuesta cuando quiero algo de los demás.						
Parece que no pueda disciplinarme para acabar tareas rutinarias o aburridas.						
En general, las personas no han estado a mi lado para darme cariño, apoyo y afecto.						
Necesito tanto a los demás que me preocupa perderlos.						
Siento que no puedo bajar la guardia cuando estoy con otras personas, si no ellos me harán daño intencionadamente.						
Soy básicamente diferente de las otras personas.						
Nadie que yo desee, querría estar cerca de mí si me conociese realmente.						
Soy incompetente cuando se trata de rendir en cualquier tarea.						
Me veo a mí mismo como una persona dependiente, en lo que se refiere al funcionamiento de cada día.						
Siento que en cualquier momento podría ocurrir un desastre (natural, criminal, financiero o médico).						
Mi padre y/o mi madre se involucran demasiado en mi vida y mis problemas, y yo en la suya.						
Siento que no tengo otra opción que ceder ante los deseos de los demás, de lo contrario se vengarán de mí o me rechazarán de alguna manera.						
Soy una buena persona porque pienso más en los demás que en mí mismo.						
Me resulta embarazoso tener que expresar mis sentimientos a los demás.						
Intento hacer las cosas lo mejor que puedo; no puedo aceptar un "bastante bien".						
Soy especial y no tendría que aceptar muchas de las restricciones que se les imponen a las otras personas.						
Si no puedo alcanzar un objetivo, me siento fácilmente frustrado y renuncio a él.						
Gran parte de mi vida, no me he sentido especial para nadie.						

	1 (Totalmente Falso)	2	3	4	5	6 (Me Describe Perfectamente)
Me preocupa que las personas a las que me siento unido me dejen o me abandonen.						
Es sólo una cuestión de tiempo el que alguien me traicione.						
No me siento unido a nadie, soy un solitario.						
No merezco el amor, la atención y el respeto de los demás.						
La mayoría de las personas están más capacitadas que yo en temas de trabajo y de rendimiento.						
No tengo sentido común.						
Me preocupa que me puedan atacar.						
Es muy difícil para mis padres (o para alguno de ellos) y para mí ocultarnos intimidades, sin sentirnos traicionados o culpables.						
En las relaciones, dejo que la otra persona tome la iniciativa.						
Estoy tan ocupado haciendo cosas por las personas que me importan, que me queda poco tiempo para mí mismo.						
Me es difícil ser cálido y espontáneo.						
Debo cumplir todas mis responsabilidades.						
Odio que me limiten o que no se me deje hacer lo que yo quiero.						
Lo paso mal cuando tengo que sacrificar gratificaciones inmediatas para conseguir un objetivo a largo plazo.						
La mayor parte de mi vida, no he tenido a nadie que realmente me escuchase, me comprendiese o que conectase con mis verdaderas necesidades y sentimientos.						
Cuando siento que alguien que me importa va a alejarse de mí o se aparta de mí, me desespero.						
Soy bastante desconfiado respecto a los motivos de los demás.						
Me siento alejado o aislado del resto de personas.						
Siento que no soy simpático.						
No tengo tantas aptitudes en el trabajo como la mayoría de las personas.						
No se puede confiar en mi juicio en las situaciones cotidianas.						

	1 (Totalmente Falso)	2	3	4	5	6 (Me Describe Perfectamente)
Me preocupa perder todo mi dinero y acabar en la miseria.						
A menudo siento como si mis padres (o uno de ellos) estuviesen viviendo a través de mí; no tengo una vida propia.						
Siempre dejo que los demás decidan por mí, de manera que no sé lo que verdaderamente quiero para mí mismo.						
Siempre he sido el que escucha los problemas de los demás.						
Me controlo tanto que las personas piensan que no tengo emociones o que soy insensible.						
Siento una presión constante para lograr y dar las cosas por acabadas.						
Siento que no tendría por qué seguir las normas básicas ni los convencionalismos que los demás siguen.						
No consigo obligarme a hacer aquellas cosas que no me divierten, incluso cuando sé que son para mi propio beneficio.						
Raramente he tenido a una persona fuerte o sabia que me diese un buen consejo o que me guiase cuando no estaba seguro de lo que hacer.						
Algunas veces estoy tan preocupado por la posibilidad de que las personas me dejen que les aparto de mí.						
Normalmente estoy al acecho de las intenciones ocultas de los demás.						
Siempre me siento poco integrado en los grupos.						
En mi hay demasiadas cosas básicas que son inaceptables, como para poder abrirme a los demás.						
No tengo tanta inteligencia como la mayoría de las personas en lo que se refiere al trabajo (o los estudios).						
No confío en mi habilidad para resolver los problemas que van surgiendo en el día a día.						
Me preocupa estar empezando a sufrir una enfermedad grave, aunque ningún médico me ha diagnosticado nada importante.						
A menudo siento que no tengo una identidad independiente de la de mis padres o pareja.						

	1 (Totalmente Falso)	2	3	4	5	6 (Me Describe Perfectamente)
Tengo muchas dificultades para exigir que mis derechos sean respetados y que mis sentimientos sean tenidos en cuenta.						
Las personas me ven como alguien que hace demasiadas cosas para los demás y no las suficientes para sí mismo.						
La gente me ve como alguien emocionalmente rígido.						
No me permito eludir fácilmente mis responsabilidades o buscar excusas para mis errores.						
Siento que lo que tengo que ofrecer es de un mayor valor que lo que pueden aportar los demás.						
Raramente he sido capaz de mantenerme firme en mis propósitos.						

Cuestionario de Actitudes Socioculturales Hacia la Apariencia

Nos gustaría saber cómo le ha sentido en las últimas semanas. Por favor, lea cada pregunta y marque la opción que más se aproxime a su opinión o su situación:

	1 (Completamente en Desacuerdo)	2	3	4	5 (Completamente de Acuerdo)
Mis compañeros/as me animan a adelgazar.					
Siento presión de mis compañeros/as para mejorar mi apariencia					
Siento presión de mis compañeros/as para parecer en mejor forma.					
Siento presión de mis compañeros/as para reducir mi nivel de grasa corporal.					
Siento presión de los medios para parecer en mejor forma.					
Siento presión de los medios para parecer más delgado/a.					
Siento presión de los medios para mejorar mi apariencia					
Siento presión de los medios para reducir mi nivel de grasa corporal.					

Inventario de Eventos Desagradables

Por favor responda las siguientes preguntas:

Parte 2. Castigo físico. Antes de los 18 años

1. ¿Le han dado alguna bofetada?	SI	NO
2. ¿Ha sido quemada con agua caliente, cigarro o algo parecido?	SI	NO
3. ¿Ha recibido puñetazos o patadas?	SI	NO
4. ¿Ha sido golpeada por algún objeto que le hayan tirado?	SI	NO
5. ¿Ha sido empujada o zarandeada?	SI	NO

Parte 3. Abuso Emocional. Antes de los 18 años

1. ¿Ha sido humillada o ridiculizada a menudo?	SI	NO
2. ¿Se ha sentido a menudo ignorada o le han hecho sentir que no cuenta?	SI	NO
3. ¿Le han dicho a menudo que no es buena?	SI	NO
4. ¿Ha sido tratada friamente, desatendida o le han hecho sentirse no querida?	SI	NO
5. Sus padres o cuidadores ¿no han sabido comprenderla o entender sus necesidades?	SI	NO

Parte 4. Acontecimientos Sexuales. Antes de los 18 años

1. ¿Le han tocado en alguna parte íntima (pecho, caderas, nalgas o genitales) creándole desconcierto y malestar?	SI	NO
2. ¿Ha frotado alguien sus genitales contra usted en contra de su voluntad?	SI	NO
3. ¿Ha sido forzada o coaccionada para que usted tocara a otra persona en alguna parte íntima del cuerpo ?	SI	NO
4. ¿Alguien ha mantenido relaciones sexuales con usted en contra de su voluntad?	SI	NO
5. ¿Ha sido obligada a practicar sexo oral?	SI	NO
6. ¿Ha sido obligada a besar a alguien con una intención más sexual que afectiva?	SI	NO

Cuestionario de Cultura Individualismo-Colectivismo

En este cuestionario deseamos saber cuánto usted está de acuerdo o en desacuerdo de algunas afirmaciones:

<i>Totalmente en desacuerdo</i>	1	2	3	4	5	6	7	8	9	<i>Totalmente de acuerdo</i>
--	----------	----------	----------	----------	----------	----------	----------	----------	----------	-------------------------------------

01. ___ Es importante para mi respetar las decisiones tomadas por mi grupo.
02. ___ Me siento muy bien cuando colaboro con los demás.
03. ___ Padres e hijos deben estar juntos siempre que posible.
04. ___ Triunfar lo es todo.
05. ___ Los miembros de la familia deben estar unidos, no importa cuanto sacrificio sea necesario.
06. ___ Me sentiría orgulloso si un compañero de trabajo ganase un premio.
07. ___ Para mí, placer significa pasar el tiempo con los demás.
08. ___ En la mayor parte del tiempo, confío en mi mismo; raramente confío en los demás.
09. ___ El bienestar de mis compañeros de trabajo es importante para mi.
10. ___ Cuando otra persona hace alguna cosa mejor que yo, me pongo tenso y molesto.
11. ___ Es importante, para mi, hacer mi trabajo mejor que los demás.
12. ___ Es mi deber cuidar de mi familia, aún cuando tenga que sacrificar mis intereses.
13. ___ Preferiría depender de mi mismo que de los demás.
14. ___ Independiente de los demás, mi identidad personal es muy importante para mi.
15. ___ La competición es la ley de la naturaleza.
16. ___ Con frecuencia hago “mis propias cosas”.

Escala de la Percepción de las Burlas

Las siguientes preguntas deben responderse con respecto al período de tiempo en que estaba creciendo (de 5 a 16 años):

1.	La gente hacía bromas sobre ti porque estabas gordo/a.	Nunca	1	2	A veces	3	4	Muy a menudo	5
1a.	¿Cómo de disgustado/a te sentiste?	Nada disgustado/a	1	2	Algo disgustado/a	3	4	Muy disgustado/a	5
2.	Cuando intentabas hacer deporte la gente se reía de ti porque estabas gordo/a	Nunca	1	2	A veces	3	4	Muy a menudo	5
2a.	¿Cómo de disgustado/a te sentiste?	Nada disgustado/a	1	2	Algo disgustado/a	3	4	Muy disgustado/a	5
3.	La gente te llamaba cosas como “gordinflón/ona”.	Nunca	1	2	A veces	3	4	Muy a menudo	5
3a.	¿Cómo de disgustado/a te sentiste?	Nada disgustado/a	1	2	Algo disgustado/a	3	4	Muy disgustado/a	5
4.	La gente te señalaba porque tenías sobrepeso	Nunca	1	2	A veces	3	4	Muy a menudo	5
4a.	¿Cómo de disgustado/a te sentiste?	Nada disgustado/a	1	2	Algo disgustado/a	3	4	Muy disgustado/a	5

Escala de Autoeficacia

	1 (Incorrecto)	2	3	4 (Cierto)
Puedo encontrar la forma de obtener lo que quiero, aunque alguien se me oponga.				
Puedo resolver problemas difíciles si me esfuerzo lo suficiente.				
Me es fácil persistir en lo que me he propuesto hasta llegar a alcanzar mis metas.				
Tengo confianza en que podría manejar eficazmente acontecimientos inesperados.				
Gracias a mis cualidades y recursos puedo superar situaciones imprevistas.				
Cuando me encuentro en dificultades puedo permanecer tranquilo/a porque cuento con las habilidades necesarias para manejar situaciones difíciles.				
Venga lo que venga, por lo general soy capaz de manejarlo.				
Puedo resolver la mayoría de los problemas si me esfuerzo lo necesario.				
Si me encuentro en una situación difícil, generalmente se me ocurre qué debo hacer.				
Al tener que hacer frente a un problema, generalmente se me ocurren varias alternativas de cómo resolverlo.				

Estilos Parentales

INSTRUCCIONES: Este cuestionario incluye una lista de algunas actitudes y conductas de los padres hasta los 16 años. Responda dentro del paréntesis en base a como usted recuerde a su padre-madre.

3 = Siempre
2 = Algunas veces
1 = Rara vez
0 = Nunca

	Padre	Madre
Hablaba conmigo con voz cálida y amigable	()	()
No me ayudaba tanto como yo lo necesitaba	()	()
Me dejaba hacer lo que a mí me gustaba	()	()
Parecía emocionalmente frío(a) conmigo	()	()
Parecía entender mis problemas y preocupaciones	()	()
Era cariñoso (a) conmigo	()	()
Le gustaba que tomara mis propias decisiones	()	()
No quería que yo creciera	()	()
Trataba de controlar todo lo que yo hacía	()	()
Invadía mi privacidad	()	()
Disfrutaba hablando conmigo	()	()
Frecuentemente me sonreía	()	()
Tendía a tratarme como a un bebé	()	()
Parecía que no entendía lo que yo quería o necesitaba	()	()
Me dejaba tomar mis propias decisiones	()	()
Me hacía sentir que no me quería	()	()
Podía hacerme sentir mejor cuando yo estaba disgustado	()	()
No hablaba mucho conmigo	()	()
Trataba de que yo dependiera de él o ella	()	()
Sentía que no me podía cuidar solo, si él o ella no estaban cerca	()	()
Me daba tanta libertad como yo quería	()	()
Me dejaba salir tan a menudo como yo quisiese	()	()
Fue sobre protector(a) conmigo	()	()
No me alababa	()	()
Me dejaba vestir como yo quería	()	()

Appendix C

Supplemental Tables of the Second Study

To better comprehend the Tables C3-C10, it is recommended to first review Tables C1 and C2, which list the full names of variables associated with each abbreviation in two research models.

Table C1

Variables, Related Abbreviations, and Items in the Spanish Model

Variables	Abbreviations	Questions/Items
Maternal Care	Aa	A1-A6
Maternal Overprotection	Ab	B1-B7
Maternal Indifference	Ac	C1-C6
Maternal Autonomy	Ad	D1-D6
Paternal Care	Ba	E1-E6
Paternal Overprotection	Bb	F1-F7
Paternal Indifference	Bc	G1-G6
Paternal Autonomy	Bd	H1-H6
Physical Abuse	Ca	I1-I5
Emotional Abuse	Cb	J1-J5
Sexual Abuse	Cc	K1-K6
Weight-Related Teasing	D	L1-L8
Peer Pressure	Ea	M1-M4
Media Pressure	Eb	N1-N4
Disconnection Schema Domain	Fa	Fa1-Fa6
Impaired Autonomy Schema Domain	Fb	Fb1-Fb5
Impaired Limits Schema Domain	Fc	Fc1-Fc2
Exaggerated Goals Schema Domain	Fd	Fd1-Fd2
Body Dissatisfaction	G	DE1-DE12
Self-Efficacy	H	FF1-FF10
Restraint	Ia	GG1-GG5
Eating Concern	Ib	HH1-HH5
Bulimia Nervosa	Ic	Ica-Icb

Table C2*Variables, Related Abbreviations, and Items in the Iranian Model*

Variables	Abbreviations	Questions/Items
Maternal Care	Aa	A1-A6
Maternal Overprotection	Ab	B1-B7
Maternal Indifference	Ac	C1-C4
Maternal Autonomy	Ad	D1-D6
Paternal Care	Ba	E1-E6
Paternal Overprotection	Bb	F1-F7
Paternal Indifference	Bc	G1-G4
Paternal Autonomy	Bd	H1-H6
Physical Abuse	Ca	I1-I5
Emotional Abuse	Cb	J1-J5
Sexual Abuse	Cc	K1-K6
Weight-Related Teasing	D	L1-L12
Peer Pressure	Ea	M1-M4
Media Pressure	Eb	N1-N4
Disconnection & Rejection Schema Domain	Fa	Fa1-Fa5
Impaired Autonomy & Performance Schema Domain	Fb	Fb1-Fb4
Other-Directedness Schema Domain	Fc	Fc1-Fc2
Overvigilance & Inhibition Schema Domain	Fd	Fd1-Fd2
Impaired Limits Schema Domain	Fe	Fe1-Fe2
Body Dissatisfaction	G	DE1-DE12
Self-Efficacy	H	FF1-FF10
Restraint	Ia	GG1-GG5
Eating Concern	Ib	HH1-HH5
Bulimia Nervosa	Ic	Ica-Icb

Table C3*Outer Loadings in the Final Spanish Model*

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fa	Fb	Fd	G	H	Ia	Ib	Ic	
A1	0.818																						
A2	0.781																						
A3	0.785																						
A4	0.761																						
A5	0.812																						
A6	0.761																						
B2		0.823																					
B3		0.773																					
B4		0.641																					
B5		0.800																					
B6		0.576																					
B7		0.694																					
C2			0.714																				
C3			0.733																				
C4			0.785																				
C5			0.733																				
D1				0.631																			
D2				0.729																			
D3				0.707																			
D4				0.812																			
D5				0.722																			
E1					0.821																		
E2					0.803																		
E3					0.815																		
E4					0.829																		
E5					0.835																		
E6					0.809																		

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fa	Fb	Fd	G	H	Ia	Ib	Ic
F2						0.814																
F3						0.794																
F4						0.599																
F5						0.790																
F7						0.638																
G2							0.810															
G3							0.774															
G4							0.822															
G5							0.856															
G6							0.621															
H1								0.701														
H2								0.772														
H3								0.766														
H4								0.755														
H5								0.676														
I1									0.664													
I3									0.696													
I4									0.763													
I5									0.815													
J1										0.730												
J2										0.786												
J3										0.744												
J4										0.745												
J5										0.541												
K1											0.691											
K2											0.698											
K3											0.757											
K4											0.721											
K6											0.696											
L1												0.913										
L2												0.812										

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fa	Fb	Fd	G	H	Ia	Ib	Ic	
L3												0.876											
L4												0.829											
L5												0.877											
L6												0.847											
L7												0.900											
L8												0.884											
M1													0.709										
M2													0.869										
M3													0.865										
M4													0.900										
N1														0.922									
N2														0.920									
N3														0.908									
N4														0.916									
Fa1															0.751								
Fa2															0.765								
Fa3															0.805								
Fa4															0.691								
Fa5															0.871								
Fa6															0.522								
Fb1																0.820							
Fb2																0.740							
Fb3																0.764							
Fb5																0.871							
Fd1																	0.860						
Fd2																	0.760						
DE1																		0.633					
DE2																		0.658					
DE3																		0.780					
DE4																		0.845					
DE5																		0.824					

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fa	Fb	Fd	G	H	Ia	Ib	Ic
DE6																		0.761				
DE7																		0.804				
DE8																		0.609				
DE9																		0.836				
DE10																		0.876				
DE11																		0.849				
DE12																		0.792				
FF1																			0.557			
FF2																			0.640			
FF4																			0.797			
FF5																			0.828			
FF6																			0.700			
FF7																			0.785			
FF8																			0.734			
FF9																			0.772			
FF10																			0.734			
GG1																				0.854		
GG2																				0.627		
GG3																				0.820		
GG4																				0.796		
GG5																				0.676		
HH1																					0.699	
HH2																					0.805	
HH3																					0.542	
HH4																					0.806	
HH5																					0.766	
Ica																						0.909
Icb																						0.592

Table C4*Outer Loadings in the Final Iranian Model*

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fa	Fb	Fc	Fd	G	H	Ia	Ib	Ic	
A1	0.875																							
A2	0.836																							
A3	0.875																							
A4	0.452																							
A5	0.828																							
A6	0.829																							
B1		0.597																						
B2		0.817																						
B3		0.782																						
B4		0.742																						
B5		0.721																						
B6		0.767																						
B7		0.593																						
C1			0.750																					
C2			0.861																					
C3			0.826																					
C4			0.791																					
D1				0.764																				
D2				0.773																				
D3				0.850																				
D4				0.854																				
D5				0.722																				
D6				0.799																				
E1					0.851																			
E2					0.820																			
E3					0.856																			
E4					0.558																			

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fa	Fb	Fc	Fd	G	H	Ia	Ib	Ic
E5					0.830																		
E6					0.812																		
F1						0.620																	
F2						0.796																	
F3						0.788																	
F4						0.718																	
F5						0.739																	
F6						0.747																	
F7						0.548																	
G1							0.716																
G2							0.861																
G3							0.826																
G4							0.801																
H1								0.785															
H2								0.764															
H3								0.848															
H4								0.852															
H5								0.746															
H6								0.744															
I1									0.722														
I2									0.428														
I3									0.829														
I4									0.738														
I5									0.772														
J1										0.765													
J2										0.819													
J3										0.818													
J4										0.832													
J5										0.774													
K1											0.735												
K2											0.731												

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fa	Fb	Fc	Fd	G	H	Ia	Ib	Ic
K3											0.715												
K4											0.750												
K6											0.667												
L1												0.851											
L2												0.836											
L3												0.897											
L4												0.893											
L5												0.900											
L6												0.899											
L7												0.889											
L8												0.868											
L9												0.842											
L10												0.877											
L11												0.809											
L12												0.825											
M1													0.809										
M2													0.856										
M3													0.899										
M4													0.895										
N1														0.953									
N2														0.958									
N3														0.913									
N4														0.942									
Fa1															0.823								
Fa2															0.738								
Fa3															0.766								
Fa4															0.608								
Fa5															0.825								
Fb1																0.931							
Fb2																0.721							
Fb3																0.836							

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fa	Fb	Fc	Fd	G	H	Ia	Ib	Ic
Fb4																0.650							
Fc1																	0.999						
Fc2																	0.537						
Fd1																		0.970					
Fd2																		0.601					
DE1																			0.533				
DE2																			0.605				
DE3																			0.741				
DE4																			0.823				
DE5																			0.736				
DE6																			0.741				
DE7																			0.753				
DE8																			0.546				
DE9																			0.846				
DE10																			0.864				
DE11																			0.858				
DE12																			0.810				
FF1																				0.452			
FF2																				0.671			
FF3																				0.620			
FF4																				0.779			
FF5																				0.795			
FF6																				0.733			
FF7																				0.755			
FF8																				0.778			
FF9																				0.692			
FF10																				0.776			
GG1																					0.834		
GG2																					0.537		
GG3																					0.747		
GG4																					0.833		

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fa	Fb	Fc	Fd	G	H	Ia	Ib	Ic	
GG5																						0.757		
HH1																							0.686	
HH2																							0.820	
HH3																							0.554	
HH4																							0.840	
HH5																							0.743	
Ica																								0.860
Icb																								0.653

Table C5

Fornell-Larcker Criterion of the Final Spanish Model

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	G	H	Ia	Ib
Aa	0.787																	
Ab	-0.326	0.723																
Ac	-0.777	0.367	0.741															
Ad	0.386	-0.659	-0.372	0.723														
Ba	0.434	-0.355	-0.430	0.280	0.819													
Bb	-0.142	0.548	0.276	-0.348	-0.233	0.732												
Bc	-0.350	0.345	0.522	-0.219	-0.835	0.290	0.781											
Bd	0.175	-0.400	-0.234	0.601	0.447	-0.588	-0.399	0.735										
Ca	-0.281	0.153	0.331	-0.177	-0.215	0.151	0.280	-0.140	0.737									
Cb	-0.327	0.255	0.395	-0.146	-0.422	0.234	0.437	-0.255	0.419	0.714								
Cc	-0.165	0.105	0.213	-0.077	-0.153	0.115	0.174	-0.082	0.154	0.205	0.713							
D	-0.064	0.195	0.094	-0.091	-0.165	0.157	0.186	-0.136	0.080	0.279	0.113	0.868						
Ea	0.011	0.078	0.035	-0.007	-0.048	-0.068	0.109	0.013	0.043	0.146	-0.035	0.307	0.839					
Eb	-0.085	0.132	0.111	-0.097	-0.174	0.093	0.211	-0.090	-0.024	0.168	0.047	0.282	0.230	0.917				
G	-0.014	0.106	0.102	0.030	-0.160	0.128	0.197	-0.078	0.014	0.239	0.062	0.498	0.269	0.553	0.777			
H	0.076	-0.182	-0.116	0.149	0.089	-0.132	-0.040	0.124	0.017	-0.096	0.031	0.078	-0.043	-0.037	-0.106	0.732		
Ia	0.004	0.074	0.078	0.034	-0.093	0.122	0.145	-0.034	-0.043	0.161	0.049	0.459	0.215	0.371	0.675	0.020	0.760	
Ib	-0.017	0.102	0.092	0.056	-0.120	0.088	0.143	-0.044	0.003	0.249	0.087	0.486	0.255	0.449	0.790	-0.138	0.676	0.731

Table C6

Fornell-Larcker Criterion of the Final Iranian Model

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	G	H	Ia	Ib
Aa	0.797																	
Ab	-0.354	0.722																
Ac	-0.798	0.403	0.808															
Ad	0.668	-0.587	-0.532	0.795														
Ba	0.569	-0.299	-0.450	0.376	0.795													
Bb	-0.184	0.694	0.278	-0.337	-0.376	0.713												
Bc	-0.451	0.384	0.604	-0.310	-0.786	0.458	0.803											
Bd	0.373	-0.449	-0.299	0.607	0.598	-0.632	-0.506	0.791										
Ca	-0.293	0.270	0.300	-0.191	-0.307	0.261	0.297	-0.209	0.712									
Cb	-0.561	0.435	0.606	-0.456	-0.521	0.371	0.574	-0.434	0.481	0.802								
Cc	-0.067	0.116	0.101	-0.014	-0.115	0.098	0.176	-0.126	0.320	0.203	0.720							
D	-0.107	0.281	0.190	-0.077	-0.068	0.272	0.165	-0.139	0.156	0.249	0.186	0.866						
Ea	-0.065	0.281	0.153	-0.089	-0.080	0.189	0.172	-0.103	0.156	0.207	0.134	0.491	0.865					
Eb	-0.074	0.234	0.127	-0.086	-0.091	0.221	0.160	-0.147	0.039	0.190	0.084	0.374	0.585	0.942				
G	-0.045	0.217	0.062	-0.060	-0.095	0.225	0.099	-0.195	0.101	0.155	0.113	0.427	0.548	0.467	0.746			
H	0.062	-0.168	-0.040	0.101	0.166	-0.198	-0.124	0.169	0.019	-0.100	-0.067	-0.086	-0.088	-0.184	-0.104	0.712		
Ia	-0.023	0.111	0.065	-0.072	-0.034	0.104	0.061	-0.133	0.041	0.108	0.011	0.283	0.223	0.230	0.518	0.089	0.749	
Ib	-0.057	0.248	0.122	-0.078	-0.058	0.229	0.101	-0.157	0.113	0.162	0.113	0.457	0.527	0.382	0.782	-0.096	0.444	0.736

Table C7*Cross-Loadings in the Final Spanish Model*

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	G	H	Ia	Ib
A1	0.818	-0.232	-0.616	0.309	0.295	-0.068	-0.230	0.110	-0.213	-0.210	-0.111	-0.026	0.029	-0.024	0.063	0.055	0.026	0.038
A2	0.781	-0.314	-0.626	0.336	0.383	-0.180	-0.322	0.177	-0.201	-0.316	-0.157	-0.111	-0.023	-0.085	-0.078	0.089	-0.046	-0.074
A3	0.785	-0.197	-0.643	0.248	0.312	-0.080	-0.248	0.077	-0.173	-0.254	-0.119	-0.036	0.020	-0.082	-0.029	0.059	-0.038	-0.024
A4	0.761	-0.277	-0.585	0.269	0.388	-0.175	-0.346	0.180	-0.273	-0.302	-0.137	-0.057	-0.021	-0.098	-0.056	0.049	-0.011	-0.055
A5	0.812	-0.248	-0.601	0.332	0.334	-0.038	-0.251	0.081	-0.268	-0.256	-0.140	-0.040	0.007	-0.078	0.018	0.043	0.058	0.020
A6	0.761	-0.261	-0.594	0.324	0.331	-0.124	-0.249	0.195	-0.197	-0.197	-0.113	-0.026	0.041	-0.033	0.020	0.059	0.029	0.017
B2	-0.338	0.823	0.364	-0.603	-0.229	0.436	0.222	-0.318	0.153	0.208	0.134	0.137	0.070	0.126	0.042	-0.089	0.016	0.022
B3	-0.301	0.773	0.330	-0.511	-0.318	0.394	0.331	-0.286	0.158	0.238	0.083	0.213	0.046	0.158	0.138	-0.134	0.099	0.142
B4	-0.079	0.641	0.155	-0.387	-0.172	0.406	0.181	-0.306	0.120	0.157	0.018	0.044	0.013	0.002	-0.003	-0.118	-0.005	-0.032
B5	-0.392	0.800	0.407	-0.538	-0.380	0.446	0.352	-0.340	0.139	0.231	0.095	0.106	0.067	0.093	0.058	-0.150	0.019	0.047
B6	-0.093	0.576	0.099	-0.270	-0.228	0.295	0.223	-0.195	0.002	0.112	0.062	0.181	0.098	0.094	0.150	-0.166	0.135	0.175
B7	-0.026	0.694	0.068	-0.463	-0.161	0.398	0.139	-0.276	0.023	0.110	0.021	0.185	0.052	0.067	0.105	-0.178	0.106	0.137
C2	-0.620	0.172	0.714	-0.232	-0.228	0.131	0.253	-0.112	0.185	0.228	0.107	0.035	-0.047	0.043	-0.020	-0.045	0.037	-0.011
C3	-0.501	0.395	0.733	-0.299	-0.300	0.279	0.431	-0.163	0.273	0.348	0.131	0.045	0.051	0.121	0.150	-0.206	0.076	0.146
C4	-0.646	0.311	0.785	-0.340	-0.434	0.159	0.458	-0.200	0.298	0.353	0.153	0.132	0.116	0.117	0.093	-0.060	0.055	0.085
C5	-0.536	0.184	0.733	-0.214	-0.293	0.252	0.389	-0.219	0.211	0.222	0.250	0.056	-0.039	0.034	0.067	-0.021	0.064	0.039
D1	0.232	-0.332	-0.215	0.631	0.105	-0.147	-0.089	0.351	-0.061	0.019	-0.023	-0.001	0.015	-0.080	0.008	0.044	0.022	0.058
D2	0.393	-0.563	-0.413	0.729	0.328	-0.289	-0.317	0.437	-0.144	-0.191	-0.057	-0.064	-0.017	-0.091	0.035	0.114	0.068	0.055
D3	0.265	-0.505	-0.240	0.707	0.238	-0.260	-0.182	0.421	-0.183	-0.128	-0.058	-0.033	-0.038	-0.097	0.005	0.140	0.003	0.050
D4	0.271	-0.535	-0.241	0.812	0.173	-0.291	-0.109	0.492	-0.163	-0.139	-0.063	-0.119	0.000	-0.052	0.030	0.146	0.023	0.010
D5	0.195	-0.393	-0.188	0.722	0.113	-0.241	-0.034	0.460	-0.063	-0.033	-0.074	-0.101	0.027	-0.021	0.024	0.073	-0.005	0.030
E1	0.334	-0.297	-0.329	0.244	0.821	-0.221	-0.630	0.396	-0.128	-0.307	-0.145	-0.125	0.002	-0.123	-0.088	0.082	-0.064	-0.025
E2	0.345	-0.311	-0.325	0.236	0.803	-0.212	-0.691	0.339	-0.180	-0.361	-0.126	-0.172	-0.049	-0.191	-0.157	0.055	-0.105	-0.144
E3	0.307	-0.260	-0.351	0.203	0.815	-0.086	-0.696	0.290	-0.202	-0.331	-0.089	-0.092	-0.021	-0.111	-0.130	0.072	-0.064	-0.087
E4	0.347	-0.227	-0.354	0.188	0.829	-0.187	-0.700	0.383	-0.188	-0.341	-0.131	-0.103	-0.084	-0.170	-0.151	0.110	-0.027	-0.120
E5	0.398	-0.346	-0.411	0.281	0.835	-0.226	-0.698	0.418	-0.210	-0.403	-0.152	-0.173	-0.076	-0.127	-0.154	0.100	-0.126	-0.115
E6	0.396	-0.301	-0.339	0.220	0.809	-0.204	-0.684	0.365	-0.146	-0.327	-0.107	-0.142	-0.004	-0.133	-0.106	0.014	-0.068	-0.097

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	G	H	Ia	Ib
F2	-0.097	0.442	0.181	-0.292	-0.175	0.814	0.200	-0.517	0.130	0.197	0.094	0.182	-0.050	0.075	0.089	-0.047	0.064	0.053
F3	-0.072	0.387	0.206	-0.246	-0.192	0.794	0.261	-0.456	0.122	0.146	0.080	0.142	-0.056	0.108	0.141	-0.107	0.155	0.105
F4	-0.080	0.356	0.189	-0.249	-0.014	0.599	0.085	-0.284	0.085	0.127	0.087	-0.022	-0.040	0.045	0.048	-0.063	0.027	0.018
F5	-0.220	0.457	0.307	-0.266	-0.314	0.790	0.347	-0.470	0.130	0.219	0.097	0.095	-0.062	0.052	0.073	-0.133	0.088	0.045
F7	0.040	0.366	0.050	-0.246	0.017	0.638	0.008	-0.375	0.060	0.151	0.063	0.149	-0.033	0.056	0.125	-0.148	0.097	0.119
G2	-0.283	0.260	0.386	-0.188	-0.729	0.177	0.810	-0.277	0.220	0.374	0.129	0.143	0.048	0.134	0.091	-0.061	0.101	0.077
G3	-0.273	0.343	0.482	-0.187	-0.591	0.376	0.774	-0.353	0.236	0.333	0.134	0.150	0.095	0.205	0.194	-0.096	0.132	0.156
G4	-0.303	0.266	0.408	-0.185	-0.761	0.222	0.822	-0.371	0.224	0.425	0.097	0.159	0.100	0.178	0.169	-0.031	0.118	0.117
G5	-0.280	0.283	0.445	-0.185	-0.701	0.200	0.856	-0.316	0.207	0.338	0.194	0.172	0.109	0.165	0.201	0.017	0.134	0.136
G6	-0.219	0.180	0.304	-0.088	-0.425	0.146	0.621	-0.221	0.213	0.203	0.131	0.091	0.071	0.142	0.101	0.030	0.072	0.061
H1	0.072	-0.252	-0.086	0.396	0.318	-0.297	-0.264	0.701	-0.041	-0.110	-0.027	-0.078	-0.052	-0.050	-0.063	0.076	0.004	-0.039
H2	0.212	-0.316	-0.282	0.413	0.522	-0.449	-0.492	0.772	-0.116	-0.305	-0.085	-0.105	0.015	-0.089	-0.053	0.105	0.010	0.003
H3	0.123	-0.319	-0.163	0.454	0.344	-0.503	-0.296	0.766	-0.192	-0.225	-0.070	-0.045	0.067	-0.060	-0.048	0.083	-0.012	-0.010
H4	0.103	-0.323	-0.154	0.522	0.172	-0.488	-0.178	0.755	-0.097	-0.145	-0.018	-0.151	-0.029	-0.050	-0.069	0.097	-0.095	-0.095
H5	0.090	-0.248	-0.118	0.460	0.158	-0.420	-0.104	0.676	-0.034	-0.068	-0.093	-0.146	0.036	-0.076	-0.062	0.096	-0.067	-0.051
I1	-0.222	0.151	0.243	-0.204	-0.157	0.163	0.191	-0.160	0.664	0.260	0.106	0.108	-0.013	-0.021	0.001	-0.052	-0.041	-0.023
I3	-0.227	0.094	0.268	-0.089	-0.155	0.108	0.207	-0.062	0.696	0.299	0.114	0.058	0.037	-0.072	-0.028	0.046	-0.061	0.013
I4	-0.202	0.078	0.237	-0.107	-0.158	0.057	0.219	-0.092	0.763	0.305	0.157	0.038	0.061	0.005	0.048	0.072	0.004	0.018
I5	-0.187	0.132	0.234	-0.132	-0.165	0.127	0.208	-0.103	0.815	0.365	0.079	0.040	0.037	0.009	0.015	-0.020	-0.032	-0.001
J1	-0.188	0.154	0.223	-0.049	-0.280	0.128	0.281	-0.123	0.307	0.730	0.172	0.321	0.137	0.180	0.145	-0.013	0.118	0.181
J2	-0.212	0.197	0.274	-0.101	-0.292	0.232	0.317	-0.226	0.277	0.786	0.139	0.227	0.128	0.113	0.226	-0.119	0.153	0.204
J3	-0.241	0.207	0.292	-0.148	-0.334	0.117	0.330	-0.183	0.330	0.744	0.177	0.233	0.147	0.100	0.165	-0.046	0.096	0.237
J4	-0.237	0.175	0.267	-0.068	-0.276	0.170	0.301	-0.170	0.357	0.745	0.117	0.139	0.043	0.107	0.185	-0.035	0.148	0.127
J5	-0.320	0.183	0.392	-0.174	-0.345	0.204	0.354	-0.223	0.212	0.541	0.128	0.043	0.055	0.097	0.125	-0.156	0.046	0.134
K1	-0.125	0.093	0.159	-0.101	-0.127	0.132	0.111	-0.124	0.097	0.149	0.691	0.097	-0.133	0.133	0.089	-0.001	0.061	0.110
K2	-0.191	0.106	0.227	-0.084	-0.093	0.066	0.092	-0.027	0.124	0.099	0.698	0.044	-0.076	-0.029	-0.020	-0.021	-0.006	-0.016
K3	-0.128	0.060	0.163	-0.061	-0.113	0.025	0.141	-0.035	0.089	0.131	0.757	0.098	-0.009	0.002	0.012	0.003	0.017	0.049
K4	-0.101	0.057	0.126	-0.017	-0.034	0.121	0.093	-0.019	0.156	0.191	0.721	0.070	0.068	0.018	0.019	0.083	-0.011	0.050
K6	-0.052	0.062	0.091	-0.017	-0.189	0.059	0.186	-0.091	0.077	0.151	0.696	0.095	0.010	0.039	0.119	0.033	0.117	0.112
L1	-0.073	0.192	0.098	-0.103	-0.147	0.139	0.160	-0.134	0.059	0.284	0.113	0.913	0.259	0.306	0.475	0.044	0.419	0.466
L2	-0.062	0.186	0.110	-0.120	-0.141	0.158	0.168	-0.144	0.013	0.200	0.111	0.812	0.216	0.341	0.469	0.022	0.410	0.433

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	G	H	Ia	Ib
L3	-0.041	0.178	0.061	-0.100	-0.150	0.123	0.161	-0.122	0.125	0.286	0.094	0.876	0.318	0.240	0.387	0.104	0.369	0.416
L4	-0.036	0.171	0.065	-0.113	-0.126	0.121	0.155	-0.136	0.088	0.201	0.068	0.829	0.237	0.278	0.371	0.130	0.354	0.369
L5	-0.078	0.162	0.095	-0.053	-0.138	0.114	0.151	-0.088	0.083	0.257	0.121	0.877	0.255	0.172	0.406	0.069	0.386	0.418
L6	-0.070	0.172	0.090	-0.067	-0.165	0.163	0.184	-0.126	0.057	0.233	0.133	0.847	0.234	0.191	0.426	0.065	0.395	0.407
L7	-0.057	0.155	0.077	-0.045	-0.130	0.123	0.156	-0.082	0.086	0.269	0.079	0.900	0.327	0.175	0.434	0.056	0.407	0.418
L8	-0.027	0.137	0.053	-0.035	-0.146	0.147	0.159	-0.112	0.051	0.209	0.069	0.884	0.285	0.248	0.476	0.067	0.438	0.437
M1	0.025	0.018	-0.022	0.053	0.005	-0.057	0.036	0.044	0.018	0.057	-0.010	0.284	0.709	0.141	0.264	-0.018	0.189	0.198
M2	-0.055	0.101	0.083	-0.026	-0.114	-0.044	0.167	-0.019	0.057	0.168	-0.067	0.236	0.869	0.195	0.217	-0.051	0.169	0.199
M3	0.023	0.053	0.020	-0.016	-0.072	-0.078	0.093	-0.001	0.051	0.130	-0.005	0.204	0.865	0.212	0.195	-0.112	0.132	0.217
M4	0.044	0.083	0.029	-0.021	0.023	-0.051	0.062	0.025	0.017	0.123	-0.031	0.314	0.900	0.217	0.238	0.036	0.234	0.243
N1	-0.097	0.148	0.101	-0.104	-0.214	0.087	0.244	-0.101	-0.024	0.166	0.042	0.243	0.217	0.922	0.466	-0.022	0.314	0.359
N2	-0.046	0.096	0.082	-0.081	-0.126	0.081	0.160	-0.075	-0.031	0.128	0.031	0.307	0.193	0.920	0.540	-0.022	0.388	0.459
N3	-0.079	0.144	0.092	-0.099	-0.192	0.079	0.219	-0.101	-0.037	0.154	0.058	0.209	0.227	0.908	0.458	-0.071	0.267	0.368
N4	-0.089	0.096	0.132	-0.070	-0.107	0.094	0.152	-0.053	0.003	0.166	0.042	0.276	0.207	0.916	0.561	-0.021	0.393	0.460
DE1	0.050	0.057	-0.015	0.005	-0.073	0.129	0.109	-0.115	0.028	0.171	0.012	0.294	0.183	0.439	0.633	0.057	0.506	0.495
DE2	-0.017	0.076	0.106	0.062	-0.082	0.002	0.107	0.010	-0.005	0.144	0.067	0.351	0.230	0.304	0.658	-0.154	0.548	0.769
DE3	-0.002	0.109	0.073	0.034	-0.119	0.138	0.122	-0.040	0.031	0.198	0.092	0.457	0.198	0.392	0.780	-0.107	0.622	0.709
DE4	-0.056	0.160	0.121	-0.032	-0.164	0.159	0.184	-0.096	0.078	0.209	0.051	0.499	0.286	0.469	0.845	-0.084	0.582	0.663
DE5	0.015	0.075	0.060	0.041	-0.104	0.110	0.138	-0.024	0.002	0.169	0.012	0.458	0.260	0.463	0.824	-0.061	0.645	0.632
DE6	-0.008	0.027	0.058	0.050	-0.085	0.048	0.109	-0.047	-0.026	0.175	0.028	0.379	0.202	0.404	0.761	-0.081	0.434	0.564
DE7	-0.028	0.098	0.102	-0.006	-0.144	0.092	0.186	-0.109	0.024	0.221	0.070	0.348	0.207	0.474	0.804	-0.112	0.461	0.582
DE8	0.007	0.038	0.061	0.081	-0.094	0.051	0.148	-0.041	-0.036	0.187	0.016	0.250	0.116	0.308	0.609	-0.128	0.325	0.503
DE9	-0.015	0.056	0.086	0.045	-0.122	0.099	0.134	-0.040	0.002	0.131	0.061	0.387	0.203	0.397	0.836	-0.065	0.530	0.573
DE10	-0.044	0.074	0.100	0.028	-0.184	0.117	0.206	-0.075	0.022	0.209	0.077	0.405	0.201	0.516	0.876	-0.093	0.556	0.605
DE11	-0.020	0.095	0.115	-0.031	-0.161	0.129	0.212	-0.106	-0.004	0.221	0.038	0.379	0.162	0.486	0.849	-0.035	0.545	0.619
DE12	0.000	0.095	0.063	0.017	-0.148	0.096	0.172	-0.053	-0.007	0.195	0.037	0.367	0.224	0.476	0.792	-0.115	0.448	0.583
FF1	-0.001	-0.014	0.039	0.031	0.037	-0.013	0.028	0.064	0.053	-0.021	0.097	0.028	-0.065	-0.027	-0.084	0.557	0.081	-0.071
FF2	0.090	-0.060	-0.148	0.073	0.046	-0.068	-0.030	0.059	-0.043	-0.089	0.056	0.077	-0.052	0.017	-0.072	0.640	-0.037	-0.140
FF4	0.117	-0.253	-0.148	0.189	0.151	-0.183	-0.090	0.165	-0.012	-0.113	0.005	0.051	-0.036	-0.090	-0.126	0.797	-0.037	-0.131
FF5	-0.004	-0.193	-0.060	0.100	0.106	-0.146	-0.057	0.117	0.002	-0.087	-0.002	0.065	-0.001	-0.021	-0.042	0.828	0.008	-0.072
FF6	0.055	-0.220	-0.120	0.127	0.136	-0.171	-0.131	0.125	-0.059	-0.187	-0.078	0.017	-0.027	-0.095	-0.126	0.700	-0.024	-0.143

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	G	H	Ia	Ib
FF7	0.078	-0.126	-0.099	0.123	0.038	-0.038	0.009	0.059	-0.028	-0.098	-0.044	0.098	-0.031	0.002	-0.028	0.785	0.072	-0.054
FF8	0.059	-0.096	-0.110	0.062	0.054	-0.065	-0.035	0.058	0.068	-0.073	0.089	0.007	-0.021	-0.046	-0.115	0.734	-0.004	-0.157
FF9	0.019	-0.132	-0.052	0.152	0.008	-0.110	0.026	0.091	0.042	0.000	0.032	0.085	-0.031	0.010	-0.043	0.772	0.084	-0.066
FF10	0.066	-0.068	-0.027	0.101	-0.005	-0.048	0.037	0.070	0.097	0.047	0.062	0.086	-0.031	0.011	-0.060	0.734	0.018	-0.066
GG1	0.027	0.021	0.051	0.068	-0.037	0.095	0.095	0.008	-0.055	0.105	0.009	0.367	0.208	0.310	0.574	0.043	0.854	0.565
GG2	-0.065	0.091	0.082	-0.016	-0.073	-0.015	0.132	0.038	0.057	0.144	0.124	0.363	0.210	0.228	0.406	0.027	0.627	0.422
GG3	0.059	0.010	-0.005	0.052	-0.056	0.077	0.054	-0.022	-0.135	0.076	-0.020	0.356	0.177	0.327	0.573	-0.033	0.820	0.537
GG4	0.005	0.049	0.068	0.025	-0.115	0.102	0.144	-0.039	-0.020	0.100	0.030	0.330	0.133	0.271	0.489	0.068	0.796	0.452
GG5	-0.034	0.129	0.117	-0.014	-0.080	0.189	0.141	-0.110	0.022	0.203	0.068	0.334	0.091	0.262	0.500	-0.024	0.676	0.579
HH1	-0.021	0.034	0.086	0.097	-0.054	0.025	0.078	-0.011	0.054	0.166	0.051	0.296	0.123	0.222	0.490	-0.079	0.477	0.699
HH2	0.014	0.044	0.010	0.062	-0.125	0.005	0.095	-0.009	-0.014	0.161	0.109	0.401	0.198	0.357	0.646	-0.157	0.545	0.805
HH3	0.004	0.071	0.064	0.017	-0.064	0.041	0.118	-0.028	0.035	0.147	-0.052	0.184	0.178	0.191	0.357	-0.043	0.286	0.542
HH4	-0.041	0.133	0.127	-0.009	-0.125	0.162	0.149	-0.111	-0.025	0.218	0.086	0.447	0.228	0.463	0.712	-0.065	0.640	0.806
HH5	-0.014	0.081	0.055	0.048	-0.055	0.068	0.088	0.009	-0.009	0.213	0.071	0.381	0.200	0.337	0.601	-0.142	0.457	0.766

Table C8

Cross-Loadings in the Final Iranian Model

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	G	H	Ia	Ib
A1	0.875	-0.301	-0.697	0.550	0.468	-0.157	-0.380	0.330	-0.269	-0.499	-0.063	-0.082	-0.037	-0.073	-0.033	-0.007	-0.019	-0.054
A2	0.836	-0.406	-0.652	0.662	0.488	-0.237	-0.367	0.382	-0.249	-0.477	-0.005	-0.068	-0.052	-0.069	-0.064	0.137	-0.038	-0.064
A3	0.875	-0.287	-0.742	0.539	0.462	-0.150	-0.383	0.278	-0.245	-0.485	-0.071	-0.175	-0.079	-0.109	-0.057	-0.003	-0.042	-0.095
A4	0.452	-0.075	-0.312	0.290	0.357	-0.072	-0.256	0.242	-0.140	-0.201	0.003	0.053	0.047	0.027	0.062	0.042	0.026	0.103
A5	0.828	-0.214	-0.662	0.487	0.482	-0.049	-0.395	0.229	-0.229	-0.467	-0.067	-0.100	-0.090	-0.069	-0.043	0.039	-0.021	-0.069
A6	0.829	-0.319	-0.656	0.592	0.470	-0.179	-0.367	0.319	-0.244	-0.476	-0.097	-0.080	-0.054	-0.021	-0.033	0.085	0.006	-0.022
B1	-0.171	0.597	0.208	-0.258	-0.155	0.440	0.196	-0.204	0.108	0.176	0.052	0.194	0.227	0.212	0.161	-0.116	0.095	0.184
B2	-0.330	0.817	0.342	-0.568	-0.208	0.519	0.285	-0.409	0.225	0.374	0.133	0.203	0.252	0.174	0.217	-0.112	0.125	0.240
B3	-0.485	0.782	0.510	-0.625	-0.299	0.501	0.363	-0.413	0.293	0.462	0.124	0.166	0.185	0.175	0.143	-0.065	0.144	0.160
B4	-0.259	0.742	0.280	-0.391	-0.232	0.538	0.292	-0.269	0.210	0.309	0.061	0.213	0.201	0.187	0.082	-0.178	-0.010	0.110
B5	-0.172	0.721	0.257	-0.278	-0.228	0.548	0.312	-0.269	0.197	0.260	0.054	0.263	0.193	0.119	0.156	-0.112	0.045	0.179
B6	-0.132	0.767	0.206	-0.378	-0.233	0.553	0.296	-0.362	0.156	0.300	0.050	0.229	0.226	0.187	0.189	-0.181	0.067	0.234
B7	0.039	0.593	-0.024	-0.254	-0.065	0.440	0.085	-0.272	0.060	0.165	0.081	0.214	0.130	0.141	0.179	-0.144	0.058	0.175
C1	-0.566	0.311	0.750	-0.419	-0.360	0.255	0.480	-0.278	0.272	0.437	0.104	0.204	0.116	0.097	0.099	-0.004	0.064	0.149
C2	-0.731	0.256	0.861	-0.439	-0.396	0.142	0.500	-0.236	0.230	0.529	0.048	0.132	0.098	0.081	0.026	0.000	0.044	0.078
C3	-0.650	0.405	0.826	-0.443	-0.370	0.271	0.518	-0.235	0.246	0.530	0.047	0.150	0.185	0.150	0.072	-0.072	0.098	0.105
C4	-0.624	0.330	0.791	-0.419	-0.328	0.235	0.453	-0.222	0.223	0.456	0.134	0.133	0.093	0.079	0.005	-0.052	0.002	0.064
D1	0.571	-0.406	-0.422	0.764	0.277	-0.218	-0.212	0.435	-0.170	-0.367	-0.024	-0.073	-0.025	-0.023	-0.018	0.112	0.005	-0.056
D2	0.477	-0.466	-0.409	0.773	0.281	-0.243	-0.245	0.446	-0.125	-0.362	0.000	-0.089	-0.108	-0.109	-0.030	0.090	-0.030	-0.053
D3	0.614	-0.517	-0.492	0.850	0.329	-0.321	-0.281	0.504	-0.161	-0.415	-0.003	-0.109	-0.113	-0.114	-0.090	0.086	-0.098	-0.091
D4	0.551	-0.576	-0.425	0.854	0.338	-0.328	-0.271	0.539	-0.149	-0.365	0.026	-0.039	-0.042	-0.077	-0.072	0.126	-0.094	-0.089
D5	0.362	-0.367	-0.245	0.722	0.199	-0.211	-0.108	0.481	-0.126	-0.247	-0.004	0.020	-0.037	-0.034	-0.023	0.074	-0.029	-0.006
D6	0.574	-0.441	-0.503	0.799	0.344	-0.266	-0.327	0.492	-0.178	-0.393	-0.062	-0.057	-0.091	-0.041	-0.042	-0.007	-0.081	-0.058
E1	0.469	-0.269	-0.361	0.295	0.851	-0.306	-0.658	0.487	-0.250	-0.420	-0.073	-0.043	-0.087	-0.093	-0.083	0.154	-0.013	-0.044
E2	0.442	-0.315	-0.348	0.334	0.820	-0.415	-0.660	0.554	-0.202	-0.448	-0.093	-0.072	-0.083	-0.121	-0.114	0.218	-0.020	-0.072
E3	0.494	-0.272	-0.429	0.319	0.856	-0.352	-0.697	0.507	-0.286	-0.453	-0.103	-0.121	-0.117	-0.129	-0.093	0.113	-0.059	-0.078
E4	0.347	-0.128	-0.241	0.234	0.558	-0.089	-0.395	0.281	-0.191	-0.245	-0.045	0.026	0.028	0.035	0.035	0.085	0.002	0.045

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	G	H	Ia	Ib
E5	0.506	-0.169	-0.400	0.268	0.830	-0.215	-0.645	0.427	-0.272	-0.421	-0.067	-0.007	-0.043	-0.032	-0.028	0.069	-0.046	-0.034
E6	0.449	-0.233	-0.346	0.331	0.812	-0.331	-0.640	0.539	-0.262	-0.453	-0.154	-0.070	-0.042	-0.044	-0.118	0.133	-0.016	-0.053
F1	-0.128	0.438	0.186	-0.157	-0.298	0.620	0.350	-0.374	0.163	0.197	0.090	0.144	0.151	0.163	0.135	-0.136	0.053	0.142
F2	-0.169	0.529	0.202	-0.347	-0.293	0.796	0.334	-0.599	0.190	0.313	0.085	0.190	0.174	0.177	0.224	-0.132	0.126	0.216
F3	-0.287	0.568	0.388	-0.378	-0.423	0.788	0.490	-0.606	0.321	0.420	0.182	0.246	0.183	0.191	0.201	-0.149	0.146	0.198
F4	-0.151	0.539	0.199	-0.213	-0.308	0.718	0.370	-0.428	0.217	0.283	0.090	0.218	0.112	0.129	0.077	-0.181	-0.063	0.102
F5	-0.033	0.460	0.121	-0.115	-0.198	0.739	0.287	-0.333	0.114	0.189	0.009	0.166	0.079	0.126	0.108	-0.115	0.038	0.104
F6	-0.057	0.495	0.136	-0.196	-0.192	0.747	0.250	-0.408	0.129	0.214	-0.023	0.221	0.144	0.192	0.217	-0.156	0.122	0.223
F7	0.069	0.414	0.003	-0.199	0.025	0.548	0.027	-0.273	0.069	0.111	-0.047	0.150	0.042	0.101	0.159	-0.121	0.081	0.157
G1	-0.330	0.354	0.470	-0.283	-0.518	0.341	0.716	-0.401	0.229	0.394	0.200	0.141	0.140	0.114	0.113	-0.001	0.087	0.080
G2	-0.393	0.262	0.483	-0.224	-0.717	0.339	0.861	-0.383	0.234	0.480	0.071	0.100	0.132	0.114	0.072	-0.097	0.016	0.098
G3	-0.386	0.349	0.523	-0.260	-0.635	0.460	0.826	-0.443	0.258	0.531	0.162	0.205	0.184	0.203	0.111	-0.158	0.088	0.127
G4	-0.336	0.272	0.462	-0.234	-0.643	0.325	0.801	-0.399	0.231	0.429	0.142	0.080	0.094	0.077	0.023	-0.131	0.008	0.016
H1	0.304	-0.343	-0.245	0.434	0.551	-0.500	-0.470	0.785	-0.164	-0.363	-0.123	-0.123	-0.114	-0.128	-0.141	0.170	-0.068	-0.122
H2	0.263	-0.370	-0.260	0.460	0.500	-0.537	-0.452	0.764	-0.160	-0.349	-0.063	-0.143	-0.088	-0.153	-0.129	0.165	-0.051	-0.120
H3	0.319	-0.391	-0.203	0.497	0.521	-0.580	-0.427	0.848	-0.198	-0.380	-0.123	-0.155	-0.095	-0.151	-0.168	0.147	-0.117	-0.115
H4	0.277	-0.394	-0.213	0.510	0.474	-0.552	-0.380	0.852	-0.132	-0.328	-0.096	-0.058	-0.046	-0.112	-0.193	0.155	-0.150	-0.133
H5	0.212	-0.303	-0.139	0.470	0.308	-0.421	-0.210	0.746	-0.137	-0.239	-0.074	-0.080	-0.092	-0.094	-0.176	0.085	-0.093	-0.127
H6	0.392	-0.315	-0.356	0.521	0.445	-0.377	-0.424	0.744	-0.199	-0.385	-0.115	-0.089	-0.055	-0.044	-0.122	0.058	-0.158	-0.130
I1	-0.222	0.242	0.238	-0.206	-0.214	0.218	0.205	-0.195	0.722	0.334	0.228	0.122	0.145	0.021	0.076	-0.043	0.093	0.094
I2	-0.018	0.044	0.064	0.088	-0.107	0.089	0.121	-0.021	0.428	0.144	0.220	0.105	0.100	-0.017	0.015	0.019	0.033	0.043
I3	-0.306	0.197	0.284	-0.194	-0.293	0.175	0.268	-0.171	0.829	0.466	0.226	0.070	0.109	0.048	0.086	0.077	0.038	0.091
I4	-0.156	0.158	0.157	-0.081	-0.194	0.163	0.203	-0.117	0.738	0.324	0.238	0.132	0.103	0.016	0.069	0.010	-0.003	0.063
I5	-0.259	0.272	0.266	-0.193	-0.244	0.259	0.231	-0.195	0.772	0.369	0.247	0.142	0.108	0.049	0.093	-0.005	-0.007	0.101
J1	-0.348	0.287	0.397	-0.296	-0.295	0.247	0.322	-0.286	0.430	0.765	0.214	0.190	0.169	0.133	0.107	-0.071	0.085	0.110
J2	-0.434	0.329	0.464	-0.365	-0.401	0.284	0.444	-0.332	0.363	0.819	0.176	0.192	0.173	0.137	0.145	-0.029	0.080	0.155
J3	-0.459	0.415	0.492	-0.366	-0.400	0.367	0.466	-0.359	0.408	0.818	0.135	0.258	0.165	0.152	0.140	-0.108	0.100	0.153
J4	-0.460	0.309	0.510	-0.355	-0.465	0.239	0.510	-0.356	0.341	0.832	0.109	0.200	0.151	0.171	0.113	-0.096	0.091	0.106
J5	-0.549	0.401	0.569	-0.446	-0.531	0.347	0.564	-0.408	0.383	0.774	0.179	0.156	0.174	0.167	0.115	-0.097	0.077	0.124
K1	-0.131	0.164	0.130	-0.079	-0.134	0.110	0.143	-0.133	0.244	0.205	0.735	0.148	0.123	0.164	0.142	-0.163	-0.012	0.088
K2	-0.081	0.081	0.145	-0.026	-0.128	0.108	0.197	-0.150	0.231	0.159	0.731	0.178	0.099	0.082	0.074	-0.041	0.001	0.072

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	G	H	Ia	Ib
K3	0.029	0.040	-0.001	0.048	-0.050	0.090	0.058	-0.099	0.225	0.074	0.715	0.088	0.051	-0.020	0.070	-0.047	0.036	0.096
K4	-0.046	0.060	0.091	0.000	-0.077	0.032	0.161	-0.048	0.250	0.180	0.750	0.133	0.116	0.027	0.076	0.029	0.021	0.101
K6	0.020	0.055	-0.037	0.031	-0.004	0.005	0.051	-0.007	0.197	0.086	0.667	0.112	0.082	0.023	0.029	-0.008	-0.004	0.046
L1	-0.050	0.234	0.142	-0.072	-0.037	0.226	0.128	-0.114	0.120	0.217	0.151	0.851	0.516	0.395	0.392	-0.063	0.288	0.424
L2	-0.043	0.210	0.105	-0.053	-0.054	0.213	0.112	-0.130	0.112	0.239	0.147	0.836	0.501	0.466	0.462	-0.084	0.316	0.460
L3	-0.159	0.272	0.223	-0.117	-0.084	0.247	0.159	-0.140	0.113	0.216	0.183	0.897	0.439	0.376	0.375	-0.130	0.230	0.410
L4	-0.070	0.251	0.114	-0.075	-0.089	0.246	0.140	-0.148	0.124	0.258	0.153	0.893	0.406	0.315	0.402	-0.080	0.272	0.427
L5	-0.117	0.288	0.189	-0.066	-0.092	0.295	0.179	-0.172	0.152	0.231	0.225	0.900	0.438	0.316	0.350	-0.088	0.254	0.370
L6	-0.074	0.244	0.137	-0.040	-0.089	0.249	0.164	-0.144	0.173	0.234	0.191	0.899	0.404	0.293	0.380	-0.091	0.247	0.398
L7	-0.160	0.234	0.220	-0.138	-0.075	0.196	0.146	-0.127	0.129	0.239	0.186	0.889	0.399	0.290	0.361	-0.102	0.279	0.372
L8	-0.121	0.233	0.178	-0.070	-0.049	0.219	0.134	-0.135	0.123	0.264	0.166	0.868	0.402	0.333	0.376	-0.097	0.256	0.367
L9	-0.142	0.256	0.232	-0.105	-0.036	0.206	0.144	-0.049	0.131	0.142	0.138	0.842	0.453	0.283	0.303	-0.071	0.180	0.367
L10	-0.070	0.234	0.143	-0.009	-0.063	0.243	0.157	-0.123	0.160	0.207	0.169	0.877	0.359	0.257	0.321	-0.055	0.168	0.363
L11	-0.090	0.250	0.203	-0.034	-0.015	0.229	0.138	-0.045	0.143	0.130	0.120	0.809	0.400	0.262	0.301	-0.034	0.187	0.349
L12	-0.027	0.226	0.115	-0.003	-0.012	0.260	0.119	-0.091	0.153	0.176	0.093	0.825	0.354	0.239	0.366	0.017	0.220	0.412
M1	-0.027	0.205	0.085	-0.054	-0.048	0.147	0.116	-0.090	0.083	0.105	0.069	0.432	0.809	0.480	0.588	-0.021	0.306	0.515
M2	-0.090	0.260	0.165	-0.110	-0.096	0.185	0.190	-0.105	0.147	0.230	0.150	0.432	0.856	0.551	0.351	-0.152	0.087	0.368
M3	-0.048	0.242	0.120	-0.040	-0.078	0.164	0.146	-0.048	0.176	0.192	0.142	0.409	0.899	0.528	0.441	-0.093	0.146	0.424
M4	-0.058	0.264	0.158	-0.104	-0.054	0.157	0.142	-0.115	0.131	0.187	0.101	0.426	0.895	0.463	0.526	-0.032	0.243	0.525
N1	-0.065	0.233	0.121	-0.069	-0.090	0.209	0.159	-0.122	0.046	0.193	0.110	0.374	0.584	0.953	0.436	-0.205	0.192	0.353
N2	-0.068	0.226	0.121	-0.090	-0.075	0.232	0.138	-0.171	0.024	0.171	0.067	0.359	0.564	0.958	0.468	-0.144	0.280	0.381
N3	-0.065	0.177	0.104	-0.065	-0.108	0.161	0.163	-0.118	0.038	0.194	0.101	0.288	0.473	0.913	0.350	-0.197	0.132	0.266
N4	-0.080	0.241	0.130	-0.098	-0.072	0.226	0.145	-0.140	0.039	0.157	0.040	0.382	0.575	0.942	0.499	-0.151	0.256	0.431
DE1	-0.057	0.083	0.063	-0.120	-0.068	0.115	0.085	-0.202	-0.026	0.081	-0.007	0.110	0.171	0.233	0.533	0.023	0.488	0.378
DE2	0.059	0.176	-0.001	0.037	0.022	0.167	0.015	-0.055	0.114	0.110	0.097	0.340	0.407	0.278	0.605	-0.011	0.335	0.638
DE3	-0.035	0.170	0.061	-0.058	-0.030	0.163	0.051	-0.164	0.058	0.092	0.064	0.321	0.331	0.311	0.741	-0.113	0.443	0.684
DE4	-0.102	0.183	0.114	-0.117	-0.107	0.158	0.107	-0.189	0.113	0.157	0.063	0.397	0.485	0.376	0.823	-0.052	0.497	0.627
DE5	-0.072	0.139	0.075	-0.096	-0.113	0.166	0.121	-0.210	0.072	0.119	0.024	0.259	0.347	0.294	0.736	0.013	0.594	0.530
DE6	-0.008	0.140	-0.015	-0.012	-0.031	0.162	0.000	-0.117	0.056	0.075	0.098	0.311	0.383	0.333	0.741	-0.131	0.378	0.565
DE7	-0.014	0.141	0.020	0.016	-0.088	0.175	0.080	-0.098	0.061	0.131	0.117	0.304	0.393	0.404	0.753	-0.170	0.303	0.584
DE8	0.055	0.107	0.004	0.003	-0.035	0.127	0.052	-0.061	-0.017	0.043	-0.019	0.282	0.337	0.282	0.546	-0.084	0.161	0.474

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	G	H	Ia	Ib
DE9	-0.014	0.192	0.023	-0.051	-0.061	0.164	0.068	-0.144	0.112	0.100	0.111	0.326	0.473	0.406	0.846	-0.052	0.383	0.595
DE10	-0.035	0.180	0.026	-0.038	-0.110	0.184	0.092	-0.149	0.108	0.102	0.110	0.353	0.479	0.411	0.864	-0.112	0.362	0.617
DE11	-0.080	0.188	0.067	-0.030	-0.119	0.221	0.105	-0.169	0.149	0.197	0.172	0.368	0.489	0.394	0.858	-0.114	0.361	0.593
DE12	-0.066	0.205	0.095	-0.067	-0.088	0.193	0.102	-0.173	0.047	0.148	0.128	0.382	0.529	0.419	0.810	-0.104	0.311	0.645
FF1	0.036	-0.100	-0.036	-0.009	0.151	-0.174	-0.131	0.139	-0.037	-0.063	-0.137	-0.155	-0.099	-0.062	0.009	0.452	0.052	-0.024
FF2	-0.019	-0.128	0.022	0.013	0.081	-0.148	-0.061	0.105	0.035	-0.039	-0.043	-0.124	-0.144	-0.152	-0.121	0.671	0.016	-0.126
FF3	0.102	-0.142	-0.054	0.116	0.147	-0.119	-0.112	0.141	-0.016	-0.077	-0.115	-0.043	-0.098	-0.199	-0.136	0.620	0.038	-0.134
FF4	0.054	-0.089	-0.023	0.072	0.137	-0.118	-0.081	0.119	0.050	-0.066	-0.028	-0.038	-0.083	-0.151	-0.066	0.779	0.133	-0.047
FF5	0.030	-0.092	-0.006	0.061	0.103	-0.128	-0.068	0.118	0.042	-0.040	0.013	-0.002	-0.024	-0.089	-0.043	0.795	0.128	-0.043
FF6	0.132	-0.160	-0.082	0.108	0.170	-0.184	-0.116	0.147	-0.065	-0.108	-0.168	-0.119	-0.087	-0.110	-0.085	0.733	0.005	-0.099
FF7	-0.011	-0.140	-0.009	0.071	0.125	-0.139	-0.127	0.113	0.058	-0.086	-0.002	-0.080	-0.050	-0.191	-0.103	0.755	0.073	-0.026
FF8	0.043	-0.116	-0.032	0.069	0.105	-0.147	-0.094	0.116	0.046	-0.086	-0.010	-0.078	-0.035	-0.131	-0.055	0.778	0.086	-0.051
FF9	0.041	-0.121	-0.056	0.073	0.099	-0.156	-0.084	0.114	-0.030	-0.088	-0.054	-0.049	-0.033	-0.090	-0.019	0.692	0.054	-0.062
FF10	0.025	-0.117	-0.021	0.104	0.090	-0.136	-0.044	0.112	0.013	-0.067	0.001	0.004	-0.003	-0.108	-0.083	0.776	0.029	-0.059
GG1	-0.028	0.105	0.072	-0.101	-0.057	0.106	0.079	-0.153	0.057	0.155	0.005	0.218	0.176	0.253	0.445	0.083	0.834	0.347
GG2	0.027	0.095	-0.013	-0.040	0.018	0.086	0.020	-0.021	0.010	0.015	-0.051	0.133	0.075	0.031	0.241	0.088	0.537	0.247
GG3	0.038	0.034	-0.020	0.032	0.033	0.062	-0.027	-0.062	-0.021	-0.012	0.012	0.190	0.233	0.145	0.374	0.055	0.747	0.316
GG4	-0.043	0.099	0.110	-0.059	-0.021	0.080	0.065	-0.116	0.036	0.109	-0.012	0.245	0.141	0.210	0.387	0.095	0.833	0.324
GG5	-0.058	0.088	0.065	-0.086	-0.075	0.059	0.075	-0.114	0.059	0.101	0.066	0.256	0.193	0.171	0.456	0.021	0.757	0.413
HH1	0.017	0.164	0.038	0.014	-0.028	0.151	0.067	-0.082	0.125	0.081	0.145	0.320	0.373	0.224	0.507	0.002	0.353	0.686
HH2	-0.049	0.197	0.120	-0.080	-0.002	0.166	0.051	-0.107	0.052	0.120	0.048	0.323	0.430	0.328	0.626	-0.083	0.414	0.820
HH3	-0.122	0.169	0.161	-0.058	-0.096	0.137	0.114	-0.061	0.128	0.144	0.046	0.276	0.203	0.104	0.330	-0.108	0.171	0.554
HH4	-0.066	0.203	0.088	-0.092	-0.086	0.195	0.094	-0.182	0.063	0.128	0.092	0.344	0.436	0.371	0.753	-0.091	0.391	0.840
HH5	-0.010	0.185	0.069	-0.056	-0.014	0.191	0.064	-0.114	0.084	0.136	0.088	0.423	0.449	0.305	0.566	-0.077	0.258	0.743

Table C9

Heterotrait-Monotrait Ratio (HTMT) for the Final Spanish Model

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fc	G	H	Ia	Ib
A																			
Aa																			
Ab	0.334																		
Ac	0.972	0.422																	
Ad	0.455	0.787	0.472																
B	0.419	0.606	0.582	0.542															
Ba	0.486	0.399	0.522	0.318															
Bb	0.178	0.690	0.346	0.443	0.248														
Bc	0.406	0.401	0.659	0.251	0.948	0.313													
Bd	0.197	0.487	0.288	0.779	0.483	0.722	0.438												
C	0.444	0.294	0.588	0.260	0.452	0.297	0.522	0.279											
Ca	0.359	0.189	0.455	0.244	0.268	0.195	0.366	0.177											
Cb	0.412	0.313	0.540	0.212	0.520	0.302	0.551	0.305	0.565										
Cc	0.205	0.136	0.294	0.123	0.188	0.147	0.222	0.123	0.211	0.269									
D	0.069	0.227	0.110	0.112	0.177	0.185	0.206	0.164	0.103	0.322	0.133								
E	0.104	0.168	0.157	0.118	0.189	0.124	0.248	0.121	0.079	0.257	0.127	0.420							
Ea	0.062	0.100	0.108	0.063	0.091	0.080	0.130	0.080	0.071	0.188	0.116	0.343							
Eb	0.094	0.152	0.129	0.112	0.189	0.106	0.239	0.102	0.051	0.200	0.079	0.297	0.255						
Fc	0.086	0.286	0.177	0.129	0.218	0.213	0.240	0.117	0.119	0.200	0.081	0.091	0.127	0.215					
G	0.071	0.137	0.141	0.064	0.173	0.157	0.221	0.103	0.063	0.285	0.104	0.519	0.302	0.590	0.295				
H	0.094	0.224	0.161	0.174	0.109	0.163	0.092	0.146	0.117	0.165	0.103	0.095	0.081	0.059	0.333	0.134			
Ia	0.075	0.140	0.115	0.064	0.113	0.177	0.181	0.102	0.116	0.210	0.122	0.525	0.262	0.424	0.182	0.763	0.095		
Ib	0.075	0.168	0.156	0.101	0.145	0.139	0.178	0.113	0.066	0.324	0.143	0.544	0.313	0.506	0.281	0.899	0.167	0.832	

Table C10*Heterotrait-Monotrait Ratio (HTMT) for the Final Iranian Model*

	Aa	Ab	Ac	Ad	Ba	Bb	Bc	Bd	Ca	Cb	Cc	D	Ea	Eb	Fe	G	H	Ia	Ib
Aa																			
Ab	0.360																		
Ac	0.927	0.438																	
Ad	0.743	0.621	0.616																
Ba	0.665	0.318	0.527	0.421															
Bb	0.223	0.833	0.308	0.370	0.394														
Bc	0.538	0.436	0.740	0.360	0.918	0.512													
Bd	0.429	0.498	0.353	0.694	0.661	0.697	0.590												
Ca	0.347	0.305	0.369	0.268	0.371	0.307	0.376	0.251											
Cb	0.636	0.472	0.720	0.518	0.593	0.407	0.685	0.495	0.582										
Cc	0.118	0.135	0.154	0.080	0.143	0.146	0.221	0.157	0.435	0.240									
D	0.130	0.323	0.218	0.092	0.081	0.297	0.186	0.151	0.193	0.269	0.211								
Ea	0.087	0.321	0.178	0.101	0.098	0.206	0.201	0.117	0.196	0.236	0.157	0.527							
Eb	0.085	0.260	0.142	0.091	0.105	0.240	0.180	0.156	0.060	0.210	0.106	0.381	0.632						
Fe	0.200	0.341	0.225	0.142	0.233	0.277	0.279	0.169	0.239	0.346	0.170	0.308	0.287	0.322					
G	0.090	0.251	0.092	0.090	0.125	0.255	0.129	0.217	0.137	0.171	0.146	0.443	0.605	0.495	0.314				
H	0.100	0.210	0.076	0.123	0.190	0.237	0.164	0.192	0.097	0.123	0.145	0.116	0.115	0.197	0.311	0.134			
Ia	0.071	0.137	0.112	0.112	0.075	0.158	0.106	0.154	0.087	0.136	0.081	0.313	0.265	0.252	0.056	0.598	0.121		
Ib	0.126	0.312	0.164	0.109	0.099	0.280	0.145	0.180	0.167	0.202	0.152	0.525	0.621	0.417	0.394	0.893	0.140	0.547	