

Empathy and Coping Strategies as Predictors of Well-being in Spanish University Students

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Abstract

Introduction. Empathy and coping strategies have been shown to be closely associated with the perceived psychological well-being of students. The aim of the present study was to analyze the relationship between empathy and coping strategies and psychological distress among students in teacher education.

Method. A cross-sectional study. Ninety teacher education students completed questionnaires (Brief Symptom Inventory, Coping Responses Inventory-Adult and Empathy Affective and Cognitive Test) as part of general health screening.

Results. Students with high risk of exhibiting psychological distress obtained significantly higher scores in empathy stress and avoidance coping strategies. Psychological distress showed a significant positive correlation with emotional discharge, cognitive avoidance, seeking alternative rewards and acceptance/resignation, and negative correlation with problem solving. Emotional discharge and problem solving explain 29.4% of the variance of psychological distress in teacher education students.

Conclusion. Recognizing one's emotions and understand the emotional states and intentions of others is beneficial to the student. The development of own resources and coping strategies will enable students adapt to stressful situations that can be found educational context.

Keywords: Empathy, coping strategies, psychological distress, teacher education students.

Received: 10/11/13

Initial acceptance: 11/24/13

Final acceptance: 17/03/14

Empatía y Estrategias de Afrontamiento como Predictores del Bienestar en Estudiantes Universitarios Españoles

Resumen

Introducción. La empatía y las estrategias de afrontamiento han sido asociadas firmemente con el bienestar psicológico percibido por los estudiantes. El objetivo del presente estudio fue analizar la relación entre la empatía, las estrategias de afrontamiento y el malestar psicológico entre estudiantes universitarios.

Método. Se realizó un estudio descriptivo, transversal. Noventa estudiantes de educación contestaron algunos cuestionarios (Brief Symptom Inventory, Coping Responses Inventory-Adult y Empathy Affective and Cognitive Test) como parte de un cribado general de salud.

Resultados. Los estudiantes con alto riesgo de presentar malestar psicológico obtuvieron puntuaciones significativamente más altas en estrés empático y estrategias de afrontamiento evitativas. El malestar psicológico mostró una correlación positiva y significativa con la descarga emocional, la evitación cognitiva, la búsqueda de recompensas alternativas y la aceptación/resignación, y una correlación negativa con la resolución de problemas. La descarga emocional y la resolución de problemas explicaron el 29.4% de la varianza del distrés psicológico en estudiantes de educación.

Conclusión. Reconocer las emociones de uno mismo y comprender los estados emocionales y las intenciones de los demás es beneficioso para el estudiante. El desarrollo de los propios recursos y estrategias de afrontamiento permitirá a los estudiantes, futuros maestros adaptarse a situaciones estresantes que puede encontrarse en el contexto educativo.

Palabras clave: Empatía, estrategias de afrontamiento, malestar psicológico, estudiantes de educación.

Recibido: 11/10/13

Aceptación inicial: 24/11/13

Aceptación final: 17/03/14

Introduction

Empathy and coping strategies have been shown to be closely associated with the perceived psychological well-being of students (Dyson & Renk, 2006; Shanafelt, West, Zhao, Novotny, Kolars, Habermann & Sloan, 2005). Indeed, both are important skills that play a role in helping students complete their studies successfully (Oceja, López-Pérez, Ambrona & Fernández-Pinto, 2009).

Eisenberg, Fabes, Murphy, Karbon, Maszk, Smith, O'Boyle and Suh (1994) define *empathy* as an affective response that enables one individual to understand the emotional state or condition of another, and it is a multidimensional concept that includes both cognitive and affective aspects (Hoffman, 2000). The cognitive dimension of empathy encompasses the intellectual or imaginative ability to put oneself in another's shoes (cognitive role taking), and to recognize and understand the emotional states and intentions of others (empathic understanding). The affective dimension includes the ability to share in both the positive emotions (empathic joy) and negative emotions (empathic stress) of another person.

One of the most important factors in ensuring psychological well-being is the establishment of positive relationships with others (Acun-Kapikiran, 2011; Shanafelt & West, 2007). In this regard, empathy facilitates a satisfactory interpersonal contact (Granello, 1999), can help to increase social popularity (Vitaglione & Barnett, 2003) and prosocial behavior (Carlo, Allen & Buhman, 1999), and may serve to mitigate aggression (Björkqvist, Österman & Kaukiainen, 2000).

Empathy is important for future teachers as it enables them to understand the needs of their pupils and, therefore, offer them adequate and high-quality attention. However, very high levels of empathic stress might interfere with professional objectivity and would likely have a negative effect on the psychological health of educators (Batson, Batson, Brummett, Shaw & Aldegue, 1995), perhaps even leading them to make erroneous or unfair decisions (Oceja, 2008).

Given that empathy facilitates emotional self-regulation those students who are capable of regulating their feelings and their emotional behaviors are likely to experience more

empathy than personal distress, and will be more able to develop coping strategies that are better adapted to the educational context.

Coping strategies comprise a set of actions and cognitions that enable students to tolerate, avoid, or minimize the effects produced by a stressful situation (Parker & Endler, 1992). Folkman and Lazarus (1986) proposed two styles of coping: approach or problem-focused coping, which seeks to modify the problem situation in order to make it less stressful, and avoidance or emotion-focused coping, whose aim is to reduce tension, physiological arousal, and emotional reactivity (Frydenberg, Lewis, Kennedy, Ardila, Frindte & Hannoun, 2003; Plancherel, Bolognini & Halfon, 1998). Approach-oriented coping is associated with positive indices of psychological well-being (Parson, Frydenberg & Poole, 1996), whereas avoidance or emotion-focused coping has been related to the perception of greater psychological distress (Kirchner, Forns, Amador & Muñoz, 2010). An adequate use of these coping strategies will enable students to adapt better to situations of academic and work-related stress.

Entering university has traditionally been regarded as a stage characterized by numerous changes that can produce stress among students (Arnett, 2000). This is because it is a period in which several factors coincide: separation from family, entering the labor market, adapting to an unfamiliar setting, and the high workload (Beck, Taylor & Robbins, 2003). The psychosocial demands that derive from this process may impact upon the psychological well-being of students, who may go on exhibit poor emotional regulation or empathy (Carr, Colthurst, Coyl, & Elliott, 2012) to rely heavily on avoidance-oriented coping strategies (Wong, Bheung, Chan, Ma & Tang, 2006), to present greater anxiety and depression (Dahlin, Joneborg, Wong, Bheung, Chan, Ma & Tang, 2006; Runeson, 2005), and to show diminished performance and lowered productivity (Chandavarkar, Azzam & Mathews, 2007).

Aim of the present study

Given that numerous studies have reported high levels of stress among students (Leung, Mak, Chui, Chiang & Lee, 2009; Travers & Cooper, 1996) and teacher educators (Chan, Lai, Ko & Boey, 2000; Leung, Siu & Spencor, 2000) it is important to determine the extent to which the capacity for emotional self-regulation and the use of coping strategies may influence students' perceptions of psychological distress. Therefore, the aim of the present

study was to examine the relationship between empathy, coping strategies, and psychological distress in teacher education students.

Method

Participants

A convenience sample of 90 students from the University of Barcelona participated in this study. All participants completed the survey during class time as part of general health screening administered in sophomore classes, all of them in the social sciences. The students ranged in age from 19 to 42 years ($M = 23.2$; $SD = 4.82$), 98% were women.

Measures

Brief Symptom Inventory (BSI) (Derogatis & Spencer, 1982). The Spanish adaptation (Ruipérez, Ibáñez, Lorente, Moro & Ortet, 2001) of Brief Symptom Inventory (BSI) was employed. The BSI is a 53-item self-report inventory designed to assess a wide range of psychological symptoms in adults on a Likert-type five-point scale ranging from one (total absence of symptom) to five (full presence of symptom). The scale provides nine symptom groups (somatization disorder, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism). The analysis was based on the General Severity Index, which provides a reliable and valid measurement of psychological distress combining information on the number of symptoms the person presents and the perceived intensity of psychological distress. The test-retest reliability ranged from 0.78 to 0.90. Cronbach's alpha ranged from 0.81 to 0.90.

Empathy affective and cognitive Test (TECA) (López-Perez, Fernández-Pinto & Abad-García, 2008). The TECA is a 33-item self-report scale designed to assess cognitive and affective aspects of empathy in adults on a Likert-type five-point scale ranging from one (total disagreement) to five (strongly agree). The scale provides five indices: cognitive role taking, empathy understanding, emotional stress, empathic joy and a global index of empathy. The test-retest reliability was 0.86. Cronbach's alpha ranged from 0.70 to 0.86.

Coping Responses Inventory-Adult form (CRI-A) (Moos, 1993). To evaluate the coping strategies, the Spanish adaptation of the Coping Responses Inventory-Adult Form (CRI-A) was employed. The CRI-Adult is a 48-item self-reporting scale which assesses coping re-

sponses to stressful life experiences in adults aged 18 and over. These responses are measure by eight 6-items scales using a four point Likert scale from 0 (“not at all”) to 3 (“fairly often”). Four scales measure approach coping: logical analysis, positive reappraisal, seeking guidance and support, and problem solving. *Logical Analysis*: a cognitive strategy designed to understand and prepare oneself mentally to cope with the stressor and its consequences. *Positive Reappraisal*: aims to reconstruct the problem in a positive form while accepting the reality of the situation. *Seeking guidance and support*: covers behavioral attempts to seek information, guidance, or support to deal with the stressor. *Problem Solving*: denotes behavioral attempts to deal directly with the problem and solve it. The four remaining scales evaluate avoidance coping: cognitive avoidance, acceptance/resignation, seeking alternative rewards, and emotional discharge. *Cognitive Avoidance*: refers to cognitive attempts to avoid thinking about the problem or stressor. *Acceptance or Resignation*: refers to cognitive attempts to respond to the problem by accepting it and resigning oneself to it, because nothing can be done about it. *Seeking Alternative Rewards*: denotes behavioral attempts to alleviate the effect of the stress caused by the problem by seeking new forms of satisfaction. *Emotional Discharge*: denotes behavioral attempts to reduce the tension by expressing negative feelings. The Spanish adaptation of the CRI-A shows good reliability, with a Cronbach’s alpha index ranging between 0.81 and 0.90. The inventory is widely used in educational and social contexts (Kirchner, Forns, Muñoz & Pereda, 2008).

Procedure

Students completed the screening instrument during the regular class periods, as was allowed by their instructors. Students also received information about the screening procedures and the study itself. They were also told that their participation was completely voluntary and they could choose not to participate or not to answer any specific questions that made them uncomfortable and they all gave written informed consent. Anonymity and confidentiality were guaranteed by using identification codes for all the data obtained. The study was conducted in line with the guidelines of the Belmont Report (1978) and the Code of Good Research Practices of the University of Barcelona (2010).

The students were classified with high or low risk of presenting psychological distress by using the criterion proposed by Derogatis (1993). Students whose scores corresponded to the 90th percentile or above on the global severity index GSI scale were considered to present high risk to exhibit psychological distress; students who scored within the normal range were

considered symptom-free or low risk to exhibit psychological distress. Globally, results were stratified according to age and sex.

Statistical Analysis

The characteristics of students with high or low risk of exhibiting psychological distress were described, in the case of quantitative variables, with averages and standard deviations; frequencies and percentages were used for qualitative variables. In order to analyze the differences between both groups, the Mann-Whitney U and Monte Carlo correction were applied to the following variables: coping strategies scales (logical analysis, positive reappraisal, seeking guidance and support, problem solving, cognitive avoidance, acceptance/resignation, seeking alternative rewards, and emotional discharge) and empathy scales (cognitive role taking, empathy understanding, emotional stress, empathic joy and global index of empathy). Linear regression analyses were used to predict the relationship between presence of psychological distress and coping strategies and empathy in students. The *Statistical Package for Social Sciences* (SPSS) version 16.0 was used for data processing. In all cases, statistical significance was set at $p < .05$.

Results

Coping strategies and empathy scales for students

Students with a high risk of exhibiting psychological distress scored significantly higher on four subscales of the CRI-A (Table 1): cognitive avoidance ($U = 552.5$, $p = .015$), acceptance/resignation ($U = 511.5$, $p = .005$), seeking alternative rewards ($U = 544.5$, $p = .012$), and emotional discharge ($U = 434.5$, $p = .0001$). On the measure of empathy (the TECA), students who were at high risk of presenting symptoms of psychological distress scored higher on empathic stress ($U = 581.0$, $p = .031$) than did those without such symptoms.

Table 1. Comparison between students with low or high risk of presenting psychological distress regarding empathy (TECA) and coping strategies (CRI-A)

	Students with low risk of psychological distress (n = 45)		Students with high risk of psychological distress (n = 45)		Mann-Whitney test		95% Confidence Interval of the Difference ^a	
	Mean	SD	Mean	SD	U	Sig. (bil.)	Lower	Upper
TECA								
Cognitive role taking	51.15	(8.37)	50.20	(8.14)	753.0	.653	.641	.337
Empathy understanding	58.00	(10.95)	57.97	(8.73)	782.0	.866	.857	.447
Emotional stress	51.67	(9.35)	55.50	(8.82)	581.0	.031	.027	.019
Empathic joy	57.97	(10.31)	60.62	(9.46)	736.5	.542	.529	.279
Global Empathy Index	59.02	(10.66)	58.22	(10.37)	670.5	.218	.207	.118
CRI-A								
Logical Analysis	49.37	(8.73)	51.50	(6.35)	669.5	.200	.189	.210
Positive Reappraisal	51.90	(9.48)	48.55	(10.54)	673.0	.217	.206	.227
Seeking Guidance and support	46.45	(7.72)	46.92	(8.11)	753.5	.656	.643	.668
Problem Solving	50.15	(8.42)	47.55	(7.58)	652.5	.151	.142	.160
Cognitive Avoidance	48.72	(9.60)	54.57	(8.20)	552.5	.015	.012	.018
Acceptance/Resignation	42.95	(8.28)	48.32	(9.53)	511.5	.005	.004	.007
Seeking Alternative Rewards	49.70	(7.97)	53.92	(7.03)	544.5	.012	.009	.014
Emotional Discharge	45.67	(4.92)	50.65	(6.64)	434.5	.001	.000	.001

^a Monte Carlo Sig. (2-tailed).*Correlations between psychological distress and the coping strategies and empathy scales*

The results in Figure 1 reveal that avoidance coping showed a significant positive correlation with psychological distress. Specifically, this was the case for cognitive avoidance ($r = .305, p = .006$), acceptance/resignation ($r = .262, p = .019$), seeking alternative rewards ($r = .274, p = .014$), and emotional discharge ($r = .489, p = .001$). There was also a significant negative correlation between psychological distress and problem solving ($r = -.255, p = .022$). However, no statistically significant differences were found in relation to logical analysis ($r = -.047, p = .676$), positive reappraisal ($r = -.207, p = .066$), or seeking guidance and support ($r = -.059, p = .605$). There were no significant correlations between scores on the empathy scales and the presence of psychological distress in students (cognitive role taking: $r = -.112$,

$p = .325$; empathic understanding: $r = -.081$, $p = .476$; emotional stress: $r = .213$, $p = .057$; empathic joy: $r = -.168$, $p = .136$; and the global empathy index: $r = .072$, $p = .528$).

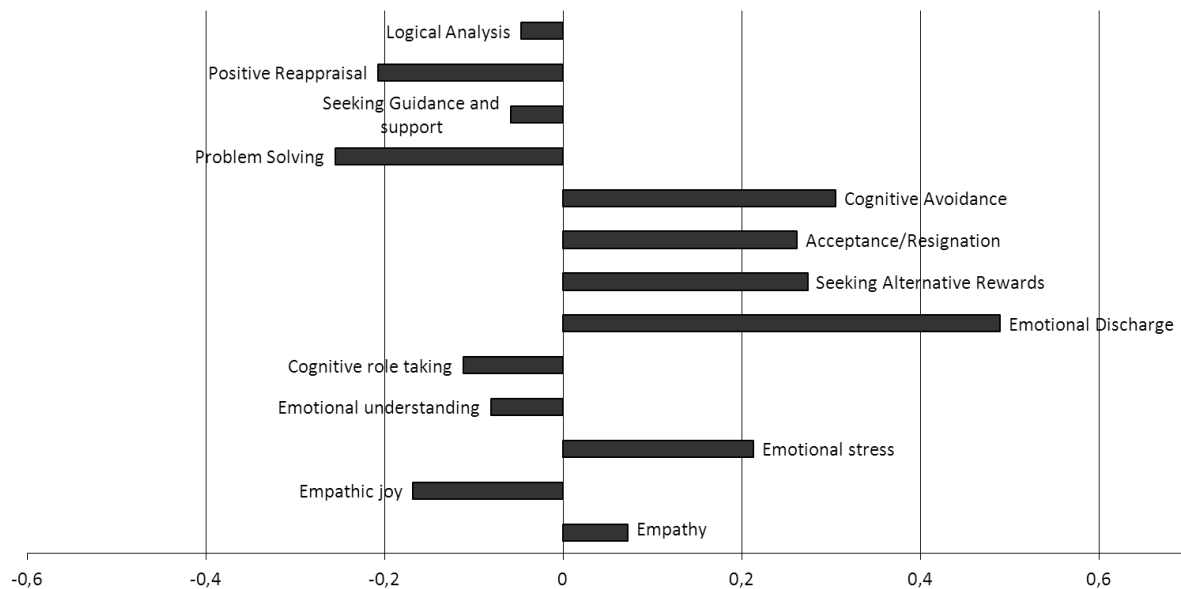


Figure 1. Correlations between coping strategies, empathy and presence of psychological distress in students

Variables that explain psychological distress in students

The results of the linear regression indicated that emotional discharge explained 22.9% of the variance in psychological distress ($F = 24.530$, $p = .0001$; 95% Confidence Interval = $.073 - 2.330$), while emotional discharge together with problem solving explained 29.4% of the variance ($F = 17.462$, $p = .0001$; 95% Confidence Interval = $1.008 - 2.318$ for emotional discharge and 95% Confidence Interval = $-.467 - -.079$ for problem solving), see Table 2.

The table below gives a linear regression analysis to determine the relationship between psychological distress in students and the independent study variables.

Table 2. Linear regression analysis; corrected R (R^2), non-standardized coefficient (B), standardized beta coefficient (β), and standard error; analysis of variance and significance level.

Independents variables	Dependent variable	R^2	B	SE B	β	F	p
Model 1							
Emotional discharge	Psychological distress	.229	.712	.144	.489	24.530	.0001
Model 2							
Emotional discharge	Psychological distress	.294	.724	.138	.497	17.462	.0001
Problem solving			-.308	.108	-.270		

Dependent Variable: Psychological distress

Model 1. Predictors: (Constant), emotional discharge

Model 2. Predictors: (Constant), emotional discharge and problem solving

Discussion

The analyses carried out show that empathy and coping strategies are related to the psychological well-being of students, this being consistent with previous findings in this area (Thomas, Dyrbye, Huntington, Lawson, Novotny, Sloan & Shanafelt, 2007). The results indicate that those students who tend to become overinvolved in the problems of others (empathic stress) present higher levels of psychological distress. One might assume, a priori, that empathy is a positive capacity and that teachers would require high levels of it in order to do their job. However, as Eisenberg, Fabes, Guthrie, and Reiser (2000) point out, excessive engagement with negative affect (empathic stress) may compromise professional objectivity, producing aversion and emotional burden in a teacher and interfering negatively with his/her personal well-being (Johanloo & Chaedi, 2009). In a similar vein, authors such as Miner (2007) have argued that those individuals who score high on empathic stress are more likely to suffer from anxiety-related problems, which in turn might facilitate the onset of burnout.

The present results also reveal a relationship between psychological distress and avoidant coping styles, both behavioral (use of alcohol or other drugs, assessed by the Seeking Alternative Rewards scale, or the discharge of feelings in order to reduce or tolerate stress better) and cognitive (avoiding thinking about the problem or stressor, or responding to a problem by accepting or resigning oneself to it). The observed relationship between the use of avoidance strategies and psychological distress is consistent with previous findings, with several authors reporting a significant correlation between stress and avoidance-oriented coping

(Dwyer & Cummings, 2001; Watson & Sinha, 2008). In a study of university students Werch, Bian, Moore, Ames, DiClemente and Weiler (2007) found that the use of avoidance strategies was associated with both alcohol consumption and psychological distress. Our results also show that less use of approach strategies (i.e., attempting to deal directly with a problem and solve it) is also related to greater psychological distress among students. In this regard, Mikulic and Crespi (2008) report that active or approach coping is associated with better health, whereas avoidance strategies are linked to various illnesses. Note, however, that Holahan, Moos, Holahan, Brennan, and Schutte (2005) showed that coping responses vary depending on the severity of the stressor. Similarly, studies have found that the greater the number of negative life events and chronic stressors, the less use is made of approach coping and the greater the reliance on avoidance strategies (Mikulic & Crespi 2008).

The present results also show that the two coping responses which best predict psychological distress in students are an overreliance on behavioral avoidance strategies such as emotional discharge (i.e., attempts to reduce tension by expressing negative feelings) and an insufficient use of active, approach strategies such as problem solving (i.e., behavioral attempts to deal directly with the problem and solve it). In line with previous findings, a non-productive coping style is related to less well-being, whereas an approach style aimed at problem solving is associated with high levels of well-being (Cross & Hong, 2012; Fickova & Korcova, 2000). Overall, our results indicate that the psychological distress perceived by the university students in this sample is influenced more by the coping strategies they use (e.g., an overreliance on emotional discharge and an insufficient use of problem-solving strategies) than by their levels of empathy.

In conclusion, university students may experience high levels of stress that reduce their performance (Morrison & O'Connor, 2005) and increase the presence of anxiety and depression (Garlow, Rosenberg, Moore, Hass, Koestner, Hendin & Nemeroff, 2008). Those students who are able to recognize their own emotions and understand the emotional state and intentions of others are likely to be more capable of minimizing or tolerating stress better. Through the development of personal resources such as coping strategies, teacher education students can be helped to deal with situations of work-related stress, to organize and plan better their teaching material, to improve their skills in relation to discipline and classroom control, and to adapt more readily to transitions and change (Jaunitz, Spokane, Lissitz & Stein, 1986). Specifically, strategies that focus on areas such as time management, positive reeval-

uation, physical exercise, the use of humor, and relaxation (Gardner, 2010) may help future teachers to achieve greater overall well-being.

Future research should examine the relationship between, on the one hand, the number and type of stressors and, on the other, the coping responses used by university students. Also analyze the relationship between empathic stress, anxiety and burnout in teachers.

Although the results of this study are of relevance to the field there are a number of limitations that need to be taken into account when drawing any conclusions. Notably, almost all the participants were women and the sample comprised students from a single faculty, which may mean that the results are not generalizable to other populations. Second, the participants are made up solely of young student teachers, and so the results might not be representative of other groups. Finally, the cross-sectional nature of the data does not allow us to determine the causality of the relation between empathy, coping strategies and psychology distress.

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