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Treatment and Therapeutic Change of Individuals ~~Sentenced~~ for Child Abuse in the Barcelona Study on Sex Offenders

Ana Martínez-Catena, and Santiago Redondo

Abstract

The sexual abuse of children is a serious social problem that must be prevented through distinct measures. Among them is the application of treatments to those who have already committed sex crimes in order to prevent them from committing a new one. To assess the efficacy of sexual offense treatment, the most common method has been to compare the recidivism rates of treated and untreated groups. Several meta-analyses in this regard—as well as some specific studies in Spain—have shown that the application of treatment is associated with lower recidivism rates. However, the analysis of the subjects' recidivism alone does not reveal the therapeutic changes that the treatment may elicit in them. Some international studies have evaluated the therapeutic improvements resulting from the application of treatments to men who had sexually abused children. In this context, this study explores the therapeutic changes experienced by a sample of subjects imprisoned for child abuse (N = 145), after participating in the treatment program applied in the Spanish prison system. Nine therapeutic variables were assessed (such as anxiety, cognitive distortions, impulsivity, and social self-esteem), before and after treatment, using an instrument named the Psychological Assessment Scale for Sex Offenders (PASSO). The obtained

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results show that most of the assessed therapeutic variables improved after treatment, with strong correlations between them. The implications of the results for treatment practice are discussed, as well as the main methodological limitations of this research.

Keywords

AQ: 2 imprisonment for child abuse, sex crime treatment, criminogenic needs, therapeutic change

AQ: 3 ## Introduction

Child sexual abuse is a very widespread criminal phenomenon that can affect up to 20% of girls and up to 8% of boys both within and outside families (Finkelhor et al., 2009; Morgan & Oudekerk, 2019; Murray et al., 2014). Suffering child abuse can have a negative impact on the neuropsychological, emotional, and behavioral development of the victims (Finkelhor et al., 2014; Pereda & Gallardo-Pujol, 2014). In addition, child sexual abuse causes great unrest and alarm in the victims' families, friends, school members, and general community. Due to its serious consequences, it is extremely important to improve the scientific knowledge on child sexual abuse and prevent it as widely and efficiently as possible.

Based on our current scientific understanding of child sexual abuse, which elements and circumstances can lead some adult people to develop a sexually abusive behavior? Although there is no a complete answer in this regard, different risk correlates have been identified that boost child sexual crimes: genetic predispositions toward sex with children (Caspi, 2000; Moffitt, 2013); traumatic experiences during childhood (including dysfunctional families, sexual victimization, and the use of antisocial pornography; Barbaree & Marshall, 2006; DeLisi et al., 2014); ~~and distinct~~ psychological and behavioral deficits, such as deviant sexual fantasies, impulsive and deviant lifestyles, antisocial distortions and attitudes, feelings of loneliness, poor problem-solving skills, hostility, alcohol/drug intoxication, severe stress, lack of empathy, low self-esteem, lack of remorse and motivation to change, and some major mental disorders such as pedophilia and depression (Barnett & Mann, 2013; D'Urso et al., 2019; Dreznick, 2003; Efrati et al., 2019; Helmus et al., 2013; Lillard et al., 2020; Watter & Hall, 2020; Zara et al., 2020). The accumulation of risk factors and disturbing experiences in an adolescent could hinder their appropriate sexual socialization, and lead to the initiation and consolidation of sexual abuse behaviors (Adams et al., 2020; DeMarco & Geller, 2020; Fergusson et al., 2013; Langton et al., 2015; Mancini et al., 2012; Maniglio, 2012).

Given the seriousness and extent of child abuse, its prevention must be carried out in the broadest and most effective possible way. Community prevention should include informational, educational, and protection campaigns aimed at the public, possible victims, and potential offenders (Chiu et al., 2020; González-Pereira et al., 2020; Knack et al., 2019; Piché et al., 2018; Wild et al., 2020). A preventive path also necessarily involves the treatment of those who have already abused children in order to reduce their likelihood of committing new crimes.

Current treatments of sex offenders are aimed at promoting favorable changes in those dynamic risk factors that have been called *criminogenic needs* (Bonta & Andrews, 2017). Criminogenic needs are defined as those risk factors ~~most~~ directly related to antisocial behavior that are open to being improved. This concept derived originally from the Risk-Need-Responsivity model (Bonta & Andrews, 2017; Fritzon et al., 2020; Hanson et al., 2020; Yoder et al., 2020), which established three main principles for the effective treatment of offenders: (a) treatment intensity must be proportional to the global level of risk shown by the participants (*risk principle)*; (b) treatment must focus on the modification of the *criminogenic needs*, or dynamic risk factors most associated with the subjects' criminal behavior (*criminogenic need principle)*, and (c) treatment should be delivered in a way compatible with the capacities and the learning style of offenders (*responsivity principle)* (Hanson et al., 2009; Långström et al., 2013). Risk factors such as pro-criminal attitudes, hostility, deviant sexual interests, impulsivity, poor resolution of conflicts, and empathy have been shown to be important criminogenic needs, which need to be addressed in the treatment of men who have been sexually abusive (Efrati et al., 2019; Olver, Nicholaichuk et al., 2014; Wakeling et al., 2013). Subsequently, the Good Lives Model (Ward, 2002) argued, from a positive psychology perspective, that the treatment of offenders should not be based merely on reducing the risk factors displayed by the offenders. Effective rehabilitation should instead be aimed at fostering the offenders' hope about their own potential for change and encouraging the development of those essential skills to achieve their human needs and deal with their problems in life.

These two conceptual models on offenders' rehabilitation support ~~most~~ of the programs currently applied to sex offenders. The most used and effective programs in this field have been those of a cognitive-behavioral nature (Bilby et al., 2006; Brooks-Gordon et al., 2006; Marshall & Marshall, 2014; Polaschek et al., 2010); in particular, the pioneering program developed by Marshall and his team ~~in Canada (Marshall, 1996),~~ which constitutes the basis of ~~most~~ current sex offenders' programs in different countries. It emphasizes promoting the participants' strengths by showing respect and empathy

towards them, while their achievements are reinforced (Marshall et al., 2011). Scientific evidence has shown that this way of therapeutically working with men sentenced for a sexual crime may improve treatment effectiveness and ~~reduces~~ the risk of the participants' reoffending (Frost et al., 2019; Martínez-Catena et al., 2016; Ward & Beech, 2006; Wielinga et al., 2019).

The effectiveness of treatments of sex offenders has traditionally been assessed by comparing the recidivism rates of treated and ~~nontreated~~ groups (González-Pereira et al., 2020). General recidivism of sex offenders is low, even without treatment, compared to that of other criminal typologies, with figures of less than 20% (Hanson et al., 2004, 2009; Leung et al., 2021). Also, when treatment is applied, treated groups usually show recidivism rates lower than those of ~~nontreated~~ sex offenders (Renn et al., 2021; Schmucker & Lösel, 2008; Walton & Chou, 2015).

Despite the evaluation of recidivism in crime is undoubtedly necessary to determine the final effectiveness of the treatment on sex offenders, this kind of analysis does not provide detailed information on the psychological changes that treatment may produce in the treated subjects. In fact, some meta-analyses and other studies have pointed out the scientific limitation of evaluating exclusively the groups' recidivism, ignoring the specific changes and mediating variables that could modulate the treatment process (Schmucker & Lösel, 2015; Serin et al., 2013; Soldino & Carbonell-Vayá, 2017). For example, in a recent meta-analysis by Harrison et al. (2020), out of 25 primary studies on the treatment of sex offenders, much variability of the factors linked to efficacy was related to the characteristics of the program, the epidemiology of the participants, the intervention format (group or individual), or the follow-up period. So, it is possible that distinct variables of the treatment process modulate the specific changes experienced by the participants in a program, contributing in different ways to its global efficacy.

A relevant way to explore these differential influences is the assessment of the participants' criminogenic needs and the therapeutic changes that a program specifically favors (Gannon et al., 2019; Mews et al., 2017; Serin et al., 2013). In this context, Beggs and Grace (2011) evaluated 2,018 subjects who had sexually abused minors and received treatment. They showed improvements after treatment in variables such as sexual deviance, anger, and anxiety in situations of intimacy and social interaction. Similarly, Olver, Beggs et al. (2014) and Olver, Nicholaichuk et al. (2014) observed favorable changes after treatment in self-esteem, anger, cognitive distortions, self-control, social anxiety, depression, social deviation, and antisocial behavior. Also, Wakeling et al. (2013) reported that those sexual offenders who had participated in treatment showed favorable changes in their socio-affective functioning, self-control, and sexual deviation. The improvement of the subjects in the

mentioned variables (sexual deviance, anger, self-esteem, self-control) has per se a therapeutic and socially positive meaning. But, in addition, it has been evidenced that these personal changes can be linked to a lower probability of committing new crimes (Lasher & McGrath, 2017; Olver & Wong, 2013; Wakeling et al., 2013).

In Spain, the application of sex offenders' treatments began in 1996, in the context of the prison system. For this, a cognitive-behavioral program was developed by Garrido and Beneyto (1996, 1997) based on the Marshall program and the characteristics and treatment needs of the imprisoned sex offenders (Garrido et al., 1995, 1998). This program includes ingredients such as sex education, the prevention of violent behavior, and emotional development. It is mainly applied in a group format and its complete administration takes between one and two years (González-Pereira et al., 2020; Redondo, 2017; Rivera et al., 2006). Over the past few decades, more than 3,000 people incarcerated for sexual crimes have participated in this program (González-Pereira et al., 2020).

Two main studies have been made in Spain by comparing the recidivism rates of treated and untreated subjects to assess the effectiveness of the sex offenders' treatment. In the first study, conducted in a Barcelona prison, of the 49 treated subjects 2 (4.1%) relapsed into sexual offenses, and of the 72 untreated subjects 13 (18.2%) relapsed, after a follow-up period of around 4 years (Redondo et al., 2005). A cumulative recidivism of 6.12% in the case of treated subjects and 21.62% in that of untreated subjects was observed, after a follow-up period of 18 years (González-Pereira et al., 2020). The second study was carried out in a prison in Madrid, with similar results after a follow-up period of four years: of the 22 treated sex offenders, 1 subject (4.5%) relapsed, and of the 21 untreated subjects 3 relapsed (13%) (Valencia et al., 2008).

The referred studies made possible to know that the treatment applied in Spain with those individuals incarcerated for sexual crimes is linked to a favorable and relevant final result, the reduction of their recidivism. But these studies did not make possible to know what therapeutic and personal changes the subjects might be experiencing during the course of treatment, which could be mediators of the decrease in their criminal risk. It is considered that the evaluation of therapeutic changes that occur in the context of a treatment can be a critical step for a more complete and global evaluation of its efficacy (Olver, Nicholaichuk et al., 2014; Schmucker & Lösel, 2015; Wakeling et al., 2013).

To assess the possible correlates that may contribute to a greater or lower probability of recidivism in sexual crimes, the first instruments designed were built mainly from the consideration of static or unchangeable risk

factors (Harris et al., 2003; McGrath et al., 2012). This bias towards static factors was a substantial limitation for evaluating variables of therapeutic change, as they are mainly dynamic factors that can vary as a result of treatment. Fortunately, more recent predictive tools, such as the Sex Offender Treatment Intervention and Progress Scale (SOTIPS; McGrath et al., 2012), have included dynamic risk factors that are susceptible to change and improvement. These new instruments can help both to determine the program objectives and to evaluate the therapeutic change experienced by the participants during treatment (Lasher & McGrath, 2017).

Based on the above, our research team at the University of Barcelona (commissioned by the General Secretariat of Penitentiary Institutions, Government of Spain) developed a specific instrument to assess, from distinct dynamic variables, the therapeutic change experienced by treated sex offenders (reference anonymized). This instrument, called the Psychological Assessment Scale for Sex Offenders (PASSO), includes 117 items that produce both a global score of therapeutic change and some specific scores related to treatment objectives (see a detailed description of this scale in the Methods section). Using this scale, some of the therapeutic changes after treatment of a group of 153 individuals sentenced for rape were assessed (reference anonymized), showing that they improved both globally and in most of the specific measures evaluated. However, the therapeutic changes experienced by treated subjects imprisoned for child sexual abuse have not been evaluated so far within the framework of the Barcelona Study.

In keeping with all that has been reasoned, the primary objective of this study is aimed at covering a specific gap in Spain regarding the evaluation of the treatment applied to men imprisoned for sexual abuse. Specifically, this article evaluates the therapeutic changes that these subjects may experience because of their participation in the treatment, in variables such as reading to change, cognitive distortions, and social esteem. Likewise, the possible interaction between all these variables is assessed. A secondary objective, derived from the previous one, is to contribute as much as possible to improve the limited knowledge still available on the therapeutic effects of treatment with people who have sexually abused children.

Methods

Participants

The study sample comprised 145 treated men serving a prison sentence in Spain for abusing children under the age of 16 years. These subjects were assessed before and after treatment.

In Spanish prisons, a treatment program is offered to all men already serving the last quarter of their sentence. Since 2006, the number of men participating in treatment has been increasing every year, starting from 317 cases treated in 2006 to a mean of 959 men treated per year in the last 5 years. Men decide voluntarily to participate in the program or not. The primary inclusion criterion for this study was that participants were close to initiating their treatment and agreed to participate in this study (without any kind of payment or prison benefit as a reward for participation). The second inclusion criterion was that participants completed the assessment instrument (described below) before and after the treatment. In total 145 subjects (serving a sentence in 36 prisons) fulfilled these criteria.

This sample is part of an ongoing national project on sex offenders, and 286 men who had sexually abused children completed the pre-treatment assessment. However, when this study started, many of them had not completed the post-treatment assessment phase for various reasons (such as not having finished the program yet, program abandonment or expulsion, move to different institutions, unexpected early release, ~~or death or illness~~). Given that the study sample could have been bigger, as a precaution this group of missing subjects was compared with the group of subjects that composed the sample at the pre-treatment assessment phase. This analysis found no significant differences between the different therapeutic needs or the global score of the two groups. These results indicated that both groups had equivalent measures in therapeutic needs and ruled out the possibility that the missing subjects were of a higher level of risk than the sample subjects.

The main personal and criminal characteristics of the sample are shown in Table 1. The mean age at the time of the offense was 34.67 years, while the mean age of the subjects at the pre-treatment assessment was 45 years. These data seem to be broadly representative of the Spanish population. In Spain, among a population of 47 million, there are about 23 million men, the range of 30 to 44 years old being the most representative (26% of the male population), with a higher concentration of men between 30 and 34 years old.

Similarly, to that observed in the general Spanish population, the socioeconomic level reported by the sample was low to medium (48.4% and 39.5%, respectively). However, the educational level of the sample (3.2% illiterate and 32% that had stopped education at elementary school level) was clearly lower than in the general population (in which 40% of individuals between 25 and 64 years old had finished middle school, 23% had finished high school, and 37% had completed higher levels of education).

As for family characteristics, 24.8% of the men in the sample reported coming from dysfunctional families, 58.3% having a stable relationship, and 69.2% having built a structured family.

Table 1. Means and Proportions for the Descriptive Variables of the Sample.

Personal Characteristics	M (SD)/%
Age at assessment time	45.00 (9.73)
Characteristics of family of origin	
Structured family	75.2%
Dysfunctional family	24.8%
Socioeconomic level of the family of origin	
Low	48.4%
Medium	39.5%
High	12.1%
Educational level	
Illiterate	3.2%
Elementary school	32.0%
Middle school	27.2%
High school	23.2%
College	14.4%
Partner relationship	
No relationship	24.2%
In a stable relationship	58.3%
In an unstable relationship	17.5%
Characteristics of acquired family	
Structured family	69.2%
Dysfunctional family	30.8%
Age at first imprisonment	36.18 (10.53)
Age at time of the offense	34.67 (10.07)
No. of offenses	2.12 (3.85)
No. of prison admissions	1.35 (0.93)
Personal use of drugs during the offense	23.8%
Type of offense	
Exhibitionism	11.9%
Minor molestation[a]	75.4%
Masturbation	32.8%
Vaginal penetration	33.6%
Oral penetration	32.8%
Anal penetration	17.9%
Relationship with victim	
Unknown to the offender	20.8%
Previously known	40.8%
Family member	38.5%
Subjects who admitted responsibility	76.0%

Note. [a] The concept minor molestation includes sexual acts with children, including touching of private parts or exposure of genitalia, inducement of minor sexual acts with the molester or with other children that are not represented in the other types of sexual acts specified in this table.

The most common sexual crimes committed by the assessed subjects in relation to minor victims were child molestation (75.4%), vaginal penetration (33.6%), masturbation (32.8%), and oral penetration (32.8%). A high proportion of their crimes were committed against previously known victims (40.8%) or family members (38.5%). Finally, in the context of this study 76% of the subjects had admitted their responsibility for the crime committed.

Measures

An *ad hoc* datasheet was designed to compile the sociodemographic and criminal data of the participants in this study.

In order to assess the possible therapeutic changes in individuals' criminogenic needs as a result of treatment, we used a scale designed by our research group (PASSO; reference anonymized)[1]. The PASSO scale was built by selecting and adapting items from different published and validated scales previously applied to large samples of men convicted for sexual offenses and violent crimes. These scales were as follows: Abel-Becker Cognitions Scale (Abel et al., 1989) to assess child molestation cognitive distortions; The Illinois Rape Myth Acceptance Scale (Payne et al., 1999) to evaluate male attitudes toward violence against women; the Aggression Questionnaire (Buss & Perry, 1992; Gallardo-Pujol et al., 2006), which assesses aggressive behavior and personality; the Balanced Inventory of Desirable Responding (Paulhus, 1984, 1991), with one scale that assesses a deliberate socially desirable response style and another scale that assesses a nondeliberate socially desirable response style; the Barratt Impulsiveness Scale 11 (Patton et al., 1995), used to assess the personality/behavioral construct of impulsiveness; the CAGE Alcohol Interview Schedule (Mayfield et al., 1974), a screening instrument to assess possible alcohol problems; the Rathus Assertiveness Schedule (Rathus, 1973) to evaluate assertiveness difficulties; the Social Self-Esteem Inventory (Lawson et al., 1979), which aims to measure the level of people's self-esteem while involved in different social situations; the UCLA Loneliness Scale (UCLA; Russell, 1996) to assess levels of emotional loneliness; and the University of Rhode Island Change Assessment Scale (McConnaughy et al., 1983) as a measure of readiness to change. For those instruments without a published validation in Spanish, the direct translation method was used. Three psychology and criminology experts judged independently the suitability and validity of the items and a pilot study was carried out to administer the translated items. Several new applications were done in different samples to develop a meticulous statistical process to improve PASSO and reduce the number of items, generating three successive versions of the scale (reference anonymized).

PASSO evaluates a total of ten therapeutic variables in two parts. The first part assesses most of the criminogenic needs of sex offenders treated in the Spanish prison program. It comprises 103 items measured using a Likert scale of ~~0 to 3~~. These items evaluate the following 9 variables: anxiety in normal/acceptable sexual interactions (13 items, $\alpha = .96$); assertiveness (13 items, $\alpha = .56$); readiness to change (7 items, $\alpha = .83$); cognitive distortions justifying child abuse (10 items, $\alpha = .75$); acceptance of the use of force (of raping) in sexual interactions (10 items, $\alpha = .73$; this scale was included here given that some men who abuse children might also show antisocial attitudes, hostility, external attribution of responsibility, and approval of the use of force); impulsivity (16 items, $\alpha = .85$), aggressiveness (11 items, $\alpha = .75$), social self-esteem (18 items, $\alpha = .89$), and feelings of loneliness and isolation (5 items, $\alpha = .80$). The second part of PASSO assesses empathy separately through The Child Molester Empathy Measure (Fernandez et al., 1999) and the Rapist Empathy Measure (Fernandez & Marshall, 2003) but because of the complexity of its evaluation these measures were not analyzed in this article.

The first part of the total PASSO score can range from 0 to 327 points in absolute terms. However, to facilitate the interpretation and comparison of the PASSO results, each of the nine sub-scales of the first part of PASSO were weighted to give a range of 0 to 10 points. Similarly, the overall PASSO score was weighted to give a range of 0 to 90 points (as empathy assessment was not included here). All these scales are ascending scales in which higher scores indicate greater improvements in the therapeutic variables evaluated. Data collection using both instruments (datasheet and PASSO) was conducted by prison staff, usually psychologists, social workers, and educators. They were previously taught the proper way to implement the assessment tools in a five-hour training session.

PASSO is a self-administered scale that requires an appropriate level of reading and understanding of Spanish. Although the items were designed to be easy to understand, the technical staff in charge of the assessment supervised and gave support to individuals during the evaluation process.

The PASSO scale was originally designed as a therapeutic assessment instrument for men who had committed sexual crimes since they constitute the vast majority of those imprisoned for these crimes in Spain and internationally. It is true that there is a small proportion of women incarcerated for sexual abuse of minors, but given their limited number, the interventions and evaluations carried out with them have been scarce up to now (Ashfield et al., 2013; Elliott et al., 2010; Ford, 2010). However, the PASSO scale could serve as a basis for the future design, with the necessary gender adaptations, of a therapeutic evaluation instrument for women perpetrators of sexual crimes.

Procedure

The Sex Offender Control Program (SOCP) applied in Spanish prisons was initially designed by Garrido and Beneyto (1996), following international guidelines and according to the main sex offender's treatment needs in some Spanish samples (Garrido et al., 1995). This treatment program is group based and is used to treat those who have committed sex offenses against women and children. In general, the program lasts from one to two years and is delivered twice weekly in two-and-a-half-hour sessions. The subjects evaluated participated in the program for an average of 18 months, equivalent to a total dosage greater than 360 hours. This is consistent with recommendations in the international literature that high-risk sexual offenders receive a treatment dosage above 300 hours (Bourgon & Armstrong, 2005).

The applied treatment ~~focused~~ on the following intervention ingredients (González-Pereira et al., 2020; Redondo, 2017; Rivera et al., 2006): (a) relaxation training; (b) analysis of history and personal development of each subject; (c) restructuring of cognitive distortions and justification of crime; (d) emotional regulation; (e) prevention of violent behavior; (f) coping techniques; (g) empathy with victims; (h) training for a positive way of life; (i) sex and health education; (j) changing sexual impulses, and (k) relapse prevention.

In the context of the prison, this program is offered by therapists to eligible men convicted for a sex offense, with an explanation about how the program works and encouragement to participate. Those inmates who agree to participate must sign a "undertaking" or therapeutic contract, agreeing with the following clauses: (a) to voluntarily participate in treatment; (b) to undergo the evaluation tests, both written and requiring audiovisual media; (c) to act honestly and sincerely both with the therapists and with the rest of the participants; (d) to work on themselves to explore their own problems and solve them; (e) to regularly attend all meetings and therapeutic sessions; (f) to share their experiences with others according to the therapeutic requirements; (g) to keep secret the information they may receive from therapy partners; (h) to respect the group's operating rules and not distort the smooth running of the program; and (i) to follow the indications of the therapist according to the established treatment. They must also accept that serious breaches of these rules can lead to temporary or permanent exclusion from the program.

The study presented here is part of the Barcelona Study on Sex Offenders, the general purpose of which is to assess the efficacy of the SOCP applied in Spanish prisons. Three groups of offenders (rapists, child molesters, and other violent offenders) were analyzed by specialized correctional staff (usually psychologists or social workers), across a total of 40 prisons that have

offered this treatment since 2006. The staff also completed, by means of interviews and consultation of case files, a sheet compiling sociodemographic and criminal data of the subjects.

A double security system was applied to assure that this study met the highest ethical standards. First, all the participating prison staff were previously trained by the researchers to apply the assessment instruments while assuring anonymization and data protection. Second, the prison central administration office oversaw the cases from the different Spanish prisons, verifying the ethical requirements.

Data Analysis

For methodological reasons, cases for whom more than 10% of items presented missing data were removed from the analysis. The remaining missing data were replaced by estimated means using the expectation-maximization method.

As a preliminary analysis found that the data were not normally distributed and did not satisfy other statistical assumptions, nonparametric tests were applied. The Wilcoxon test was ~~applied~~ for intra-individual analysis. The Bonferroni post hoc correction test was applied to the analyses performed (established at a bilateral p value < .005). To assess the relevance of the differences between groups, Cohen's d effect sizes were also computed for the intra-subject differences found by manual computations. As for the interpretation of this effect, Cohen considered a $d = 0.2$ as a "small" effect size, which would mean that the difference between groups is trivial. ~~An effect size~~ of 0.5 represents a "medium" effect size and 0.8 a "large" ~~effect size.~~

The average of the repeated measures data for each participant was computed before performing Pearson correlations to explore the relationships between different therapeutic variables (Bakdash & Marusich, 2017; Estes, 1956).

Results

Criminogenic Needs or Therapeutic Variables at the Pre-treatment Assessment

Table 2 displays the means and standard deviations of the criminogenic needs, or therapeutic variables, of the sample at the pre-treatment assessment. The highest criminogenic needs or therapeutic variables (represented by lower scores in PASSO) were *assertiveness* ($M = 5.41$), *feelings of loneliness* ($M = 6.45$), and *social self-esteem* ($M = 6.65$). The lowest needs (indicated by

Table 2. Comparisons Between the Pre- and Post-treatment Assessments of the Therapeutic Variables.

Therapeutic variables	Pre-treatment		Post-treatment			
	Mean	DS	Mean	SD	*p* value	Cohen's *d*
Social self-esteem	6.65	.66	6.87	1.43	.034	
Assertiveness	5.41	.33	5.95	1.20	.001*	0.39
Readiness to change	8.77	.91	9.05	1.48	.096	
Child abuse cognitive distortions	9.79	.60	9.88	.43	.051	
Acceptance of use of force in sexual interactions	8.96	.17	9.55	.80	.001*	0.59
Impulsivity	7.14	1.60	7.59	1.32	.001*	0.34
Aggressiveness	7.37	1.47	7.88	1.41	.001*	0.39
Sexual anxiety	8.03	2.62	8.52	2.22	.061	
Feelings of loneliness	6.45	2.49	7.15	2.19	.001*	0.32
Total PASSO score	68.60	8.63	72.45	7.67	.001*	0.49

Note. * Intra-subject significant differences assessed by Wilcoxon test with Bonferroni correction $p < .005$.
It has to be remembered that all variables are coded in positive meaning an increase in the score an improvement on the need. For instance, the post-treatment increase on the score of impulsivity means the improvement of this need.

PASSO scores closer to 10 points) were *child abuse cognitive distortions* ($M = 9.79$) and *acceptance of the use of force in sexual interactions* ($M = 8.96$). The total PASSO score, where a lower score suggests higher criminogenic need, was 68.52 (possible range of 0 to 100 points).

Figure 1 shows, through box plots, the distribution of the scores obtained for the sample using PASSO. The means are indicated by dotted lines. As can be seen, the distributions of the scores differed for each therapeutic need. Most of them were close to the maximum *PASSO* score, which suggests a low need. The box plot of *assertiveness* indicates that it was the therapeutic variable where the individuals showed the highest criminogenic need. Also, the upper and lower extremes of the box plots reached the minimum score of the

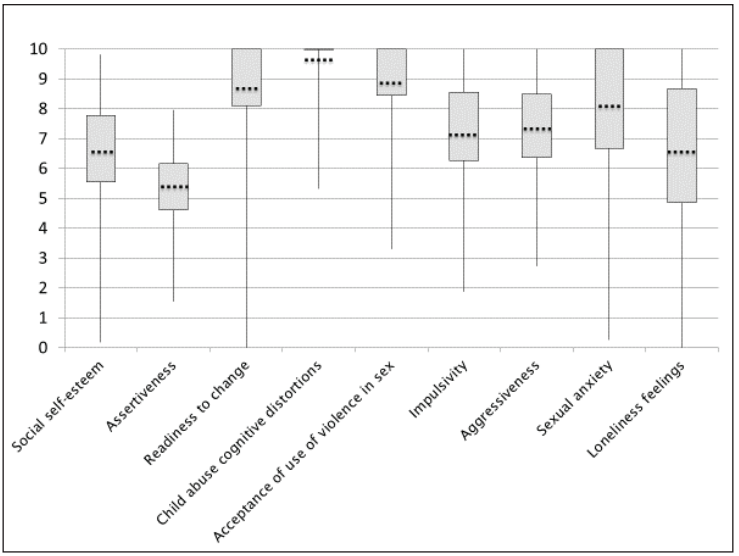

Figure 1. Distribution of the PASSO scores in the pre-treatment assessment.

scale (0 points) in some variables such as *social self-esteem, readiness to change, sexual anxiety* and *feelings of loneliness.* This indicates that some subjects show high needs in these therapeutic variables, while most of them have low needs.

The box plots of the therapeutic variables c*hild abuse cognitive distortions* and *acceptance of use of force in sexual interactions* deserve a special mention as the scores were concentrated at the top of the range, indicating a low therapeutic need in these respects.

Therapeutic Changes After Treatment Participation

Table 2 shows the comparisons between the pre- and post-treatment assessments of the criminogenic therapeutic needs or variables that are the targets of treatment. By means of Wilcoxon test with Bonferroni correction and the calculation of effect sizes, significant differences were found between the two periods in six of the nine therapeutic variables assessed. A significant increase was observed in the scores for *social self-esteem and assertiveness* (meaning an improvement in these needs), as well as in the variables *acceptance of use of force in sexual interactions, impulsivity, aggressiveness,* and *feelings of loneliness* (meaning a reduction in these needs). The *total PASSO*

score also showed a significant increase after treatment, suggesting a global therapeutic improvement. The computed effect sizes ranged between 0.32 and 0.59 Cohen's *d*, which are considered to be from low to moderate effect sizes. The therapeutic variable with the smallest effect size was *feelings of loneliness* ($d = 0.29$) followed by *assertiveness* ($d = 0.39$). On the other hand, the therapeutic variable with the highest effect size was *acceptance of use of force in sexual interactions* ($d = 0.59$). The effect size obtained by the *total PASSO score* was also a moderate effect size with a Cohen's *d* of 0.49.

Association Between the Therapeutic Variables

The relationship between the criminogenic needs or therapeutic variables assessed with PASSO is shown in Table 3 via Pearson's correlations. As can be seen, most of the criminogenic needs were strongly correlated with each other. This was especially the case for *feelings of loneliness, social self-esteem,* and *assertiveness*, which showed strong to medium associations with most of the other therapeutic variables assessed, as well as with the total PASSO score. The strongest correlations were found between *impulsivity* and *aggressiveness (*$r = .73$) and between *impulsivity* and *feelings of loneliness* ($r = .69$). *Aggressiveness* also correlated strongly with *feelings of loneliness* ($r = .68$). In parallel, the correlations shown by *child abuse cognitive distortions* and *acceptance of use of force in sexual interactions* are interesting even though their magnitudes were only of medium to low strength. In this specific case, distortions regarding the *acceptance of use of force in sexual interactions* showed associations with *aggressiveness, impulsivity, sexual anxiety,* and *feelings of loneliness*.

Discussion

The primary objective of this study was to describe the therapeutic changes, and their interactions, experienced after treatment by a sample of 145 individuals serving a sentence for child abuse. The evaluation of these changes was carried out by means of the PASSO, which yields both a global score of therapeutic change and nine specific scores on therapeutic needs addressed in the program. In the pre-treatment period, the subjects showed intense therapeutic need regarding *assertiveness, feelings of loneliness* and *social self-esteem*. In contrast, they showed fewer difficulties in the variables *cognitive distortions related to child abuse* and to the *use of force in sexual interactions.*

The post-treatment assessment revealed that six of the nine therapeutic needs assessed here favorably improved following treatment: *social*

Table 3. Pearson's Correlations Between the Different Therapeutic Variables.

	1	2	3	4	5	6	7	8	9	10
1. Social self-esteem	1									
2. Assertiveness	.45**	1								
3. Readiness to change	.05	.07	1							
4. Child abuse cognitive distortions	.14	.08	.06	1						
5. Acceptance of use of violence in sexual relations	.02	.17*	.09	.51**	1					
6. Impulsivity	.51**	.42**	-.06	.11	.24**	1				
7. Aggressiveness	.42**	.28**	-.02	.12	.26**	.73**	1			
8. Sexual anxiety	.22**	.51**	.04	.17*	.32**	.29**	.22**	1		
9. Feelings of loneliness	.56**	.43**	-.05	.18*	.23**	.69**	.68**	.28**	1	
10. Total PASSO score	.67**	.66**	.19*	.30**	.44**	.77**	.72**	.61**	.81**	1

Note. *. Correlation is significant at 0.05 level (bilateral).
**. Correlation is significant at 0.01 level (bilateral).

self-esteem, assertiveness, acceptance of the use of force in sexual interactions, impulsivity, aggressiveness, and *feelings of loneliness.* The global PASSO score also increased after treatment participation. This highlights a global therapeutic improvement of the treated subjects, with a medium but relevant effect size found in the pre- and post-treatment comparison. These favorable changes are consistent with similar results obtained in previous studies on the treatment of sex offenders (González-Pereira et al., 2020; Martínez-Catena & Redondo, 2017; Olver, Nicholaichuk et al., 2014; Wakeling et al., 2013).

On the contrary, the variables *social self-esteem, readiness to change, cognitive distortions on child abuse* and *sexual anxiety* did not change after treatment. Although *social self-esteem* initially increased slightly, the difference only shows a marginal significance (p value = .034, which did not overcome Bonferroni correction). Nonetheless, the fact that *social self-esteem* and *sexual anxiety* showed strong correlations with other therapeutic variables, which also were objectives of the treatment, suggests that both variables

might improve in line with related therapeutic factors and be empowered by them. Regarding *readiness to change*, at the pre-treatment assessment the participants showed scores close to the top of the range. Therefore, although the mean of *readiness to change* increased in the post-treatment period, the pre-post difference did not reach statistical significance. Contrary to self-esteem, readiness to change did not show any significant correlation with other therapeutic variables.

Delving into the possible interactions between variables, the correlation analysis revealed strong and significant associations between several of the assessed therapeutic variables. For instance, *feelings of loneliness* correlated with almost all the remaining variables, but more strongly with the improvements of *social self-esteem* and *assertiveness* and with the reductions in *impulsiveness* and *aggressiveness*. This result could suggest that the various ingredients of the applied treatment (relaxing training, analysis of personal history, restructuring of cognitive distortions, prevention of violence) would not only have an isolated effect on their corresponding therapeutic objectives; beyond this, the various therapeutic ingredients could be favoring a more global therapeutic change, appreciable in cross-therapeutic improvements of different criminogenic needs (reference anonymized).

Regarding the variable *feelings of loneliness* our results suggest that the relevance of this factor has probably been underestimated by previous research, both as a correlate of sexual offending and as an objective of treatment. Its correlation with most of the other therapeutic variables could be indicating that the treatment of the feelings of loneliness of those incarcerated for sexual abuse should be a critical ingredient of the programs since it seems to have broad therapeutic effects (Maniglio, 2012; Stansfield et al., 2020). In this way, new community interventions with released sex offenders, such as the Circles of Support and Accountability, one of whose main objectives is to counteract their loneliness and isolation after prison, have shown to favor the social reintegration of these individuals (Dwerryhouse et al., 2020; Stansfield et al., 2020; Wilson et al., 2009).

Concerning cognitive distortions and justification of crime, no high deficiencies were initially found in the sample. The two types of cognitive distortions assessed, about child abuse and the use of force in sexual interactions, strongly correlated each other. In principle, it would seem logical to expect that the cognitive distortions of those people who have sexually abused children differ from those of individuals who have raped a woman (Milner & Webster, 2005; Sigre-Leirós et al., 2015). But our sample not only showed, as could be expected, cognitive schemas related to children as sexual partners but also different justifications involving the use of force in sexual interactions. These results could reflect the notion that men who sexually abuse

children can also show antisocial schemas as, for example, Babchishin et al. (2015) and O'Halloran & Quayle (2010) found in studies about online child molesters. A practical ~~implication of this~~ result is that probably both types of cognitive distortions and justifications, related to children abuse and to the use of force in sexual interactions, should be goals of treatment. This is currently done in the program applied in Spanish prisons, whose essentially group format favors the convergence in the treatment of men sentenced for both types of crime.

An implication of ~~these results~~ for general knowledge ~~in this matter~~ is that the relationship observed between distinct criminogenic or therapeutic needs (cognition, social skills, emotions), susceptible to mutual improvement, could be critical for a global therapeutic change of the individuals. Hence, a better understanding of the interrelations between different therapeutic ingredients, and their specific and global effects, could help practitioners to work more efficiently with the diversity usually found in participants in treatment. As prescribed by the *responsivity* principle (Bonta & Andrews, 2017), each treated subject could show some specific needs, which may require individual adaptations of a generic program (Bowen et al., 2008; Serin et al., 2013). For this, nothing could be more important than knowing as precisely as possible the possibilities and probable effects of each ingredient of a program and of the program as a whole.

In many Western countries, people that have committed sexual offenses usually receive both severe prison punishment and rehabilitative treatment (Marshall & Marshall, 2014). In this context, a major obstacle for the rehabilitation of sex offenders is the strong labeling and rejection that they commonly elicit, due to the reprehensible nature of their crimes and the belief that they are irretrievable people (Barnett & Mann, 2013; Evans & Cubellis, 2015; Harper et al., 2018; Maruna et al., 2004). However, for the rehabilitation and social reintegration of men sentenced for sex crimes it is essential that, after finishing their sentences, they be readmitted to and supported in the community. Even those people who have previously committed sexual offenses are not inevitably destined to continue committing them, if they receive treatment and the necessary social support (Lasher & McGrath, 2017; Maruna et al., 2004).

Some of the favorable changes experienced by these subjects in the context of treatment could help to counteract the negative effects produced by labeling and social rejection after finishing their sentence, by improving, for example, their self-esteem. Furthermore, these personal changes could offer the public a less negative image of them, favoring their acceptance and social

reintegration. In order to promote the criminal desistance of those who have previously abused minors, it will be necessary to improve their social attitudes and behaviors (which could be facilitated by treatment); and, at the same time, ~~improve~~ their social stability and acceptance, including new social ties and the availability of a job (González-Pereira et al., 2020; Lasher & McGrath, 2017).

This study undoubtedly has limitations that should be remedied in future research. Among them, there are three particularly relevant difficulties that we want to highlight. The first concerns the main assessment instrument used here to evaluate therapeutic change, the PASSO scale. Ongoing analyses that we are carrying out on this scale is highlighting that some of the items that assess cognitive distortions of treated participants may be overly transparent. Therefore, subjects may respond more favorably to these items due to a social desirability bias. This could be the reason why a very low level of cognitive distortions was detected in the sample. These problematic items are currently under re-evaluation and refinement, in order to improve their formulation.

Second, the fact that this evaluation is part of the more global framework of a national study has produced some methodological difficulties regarding a better control of the information on attrition and abandonment of the program. A preliminary analysis carried out in this regard did not show initial differences between the participants in the study and the subjects who dropped out. Nevertheless, when more participants have completed the program, future analyses should assess the extent to which subjects finish or did not finish the program, and how these respective rates could influence the results on therapeutic changes explored here.

A final limitation concerns the use of a pre-post treatment design. This design allowed us to determine the global changes after treatment in the therapeutic variables evaluated (i.e., self-esteem, assertiveness, readiness to change, etc.). However, it did not allow us to explore the dynamics of the therapeutic change produced during the treatment process in depth. For this, it would have been necessary to use a repeated measures design, including three or more assessments. McGrath et al. (2012) and Lasher and McGrath (2017) took this approach in their application of SOTIPS to two samples, respectively 759 and 563, of perpetrators of sexual child abuse. Undoubtedly, the use of a repeated measures design requires much greater research effort and resources. Addressing this will be a major challenge in future analyses.

To sum up, the results of this study highlight that individuals who had committed crimes of sexual abuse of children experienced, after treatment, various therapeutic improvements (in assertiveness, readiness to change,

cognitive distortions, aggressiveness) that could contribute to their criminal desistance. A favorable relationship between therapeutic changes and criminal desistance has been shown in previous research (González-Pereira et al., 2020; Lasher & McGrath, 2017; Martínez-Catena & Redondo, 2017; Olver, Nicholaichuk et al., 2014; Wakeling et al., 2013). The empirical analysis of the eventual association between therapeutic change and actual desistance is another important consideration for our future research.

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Note

1. In a strict sense, criminogenic needs refer to those risk factors or dynamic deficits more directly related to criminal behavior, which are susceptible to change and improvement by means of a treatment (Bonta & Andrews, 2017); the therapeutic variables here would be those elements considered objectives of the treatment and also evaluated as measures of its efficacy. That is, in practice there is an evident overlap between the two concepts: each criminogenic need has its corresponding variable or therapeutic objective. As a result, for the purposes of this study, both expressions (criminogenic needs and therapeutic variables) will be used with an analogous meaning and therefore in practice as synonyms.

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Supplemental Material

Supplemental material for this article is available online.

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