Behavioral Patterns of Child Sexual Abuse and Their Relationships with Personality Characteristics

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Authors' contributions

This work was carried out in collaboration between all authors. Authors CA and PB designed the study. Authors CA, AO and JMT wrote the first draft of the manuscript. Authors CA, VM and ER managed the literature searches. Authors CA, AO and JMT performed and reported the analysis. All authors read and approved the final manuscript.

Original Research Article

ABSTRACT

This paper replicates the three types of patterns of child sexual abuse of Canter, Hughes and Kirby [1] based on frequency and co-occurrence of different patterns of abusive behaviors. In a sample of 206 Spanish men convicted of child sexual abuse, three abusive patterns are obtained: Intimacy, Aggressive and Criminal-Opportunist pattern. A mixed group Aggressive- Opportunist is also found. These groups differ significantly in some personality characteristics.

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1. INTRODUCTION

Like all sexual offenders, child molesters constitute a heterogeneous population of individuals. The perpetrators can be male or female, heterosexual, homosexual, bisexual, married or single, and of any race or economic status. They begin abusing for a variety of reasons but many have common characteristics including poor social skills, low self-esteem, feelings of inadequacy, a sense of worthlessness and vulnerability, a hindrance to normal adult relationships or previously frustrating experiences with adult relationships, they see themselves as physically unattractive, have problems with potency, and they have feelings of inadequacy, humiliation and loneliness [2].

Depending on the reviewed study, most child sex offenders are men, between 90% and 97% of the total (Canter & Kirby, [3]; Gallaher, Bradford & Pease, [4]). With respect to their age, the most common age ranges from 30 to 50 years old, even an alarming 15%-20% of the child molesters are also less than 18 years old. Another age group also quite frequent is older than 60 years, and according to some studies, these people are involved in a 15% of child abuses [5].

As described in the literature, these child sexual offenders have an economic and educational status higher than the average of non-sexual delinquents when arrested [6]. With respect to marital status and having or not children on their own, studies are not conclusive. Some authors found a higher frequency of married and with children among the child sexual abusers compared to other types of delinquents [7], whereas other studies found higher presence of singles without children and/or no differences in age, socioeconomic status or educational level [8,9]. As regards the upbringing/nurturing antecedents, literature agrees that child sexual offenders are more likely to have suffered sexual offenses as children, as well as other types of abuses such as emotional offenses or domestic violence [10]. Some recent studies suggest that most offenders were not sexually abused as children [11], with a group of parental sex offenders motivated by criminogenic needs, some sexual deviance and more criminal versatility than has been presumed [12] and approximately one-fifth reoffended non-sexually (22%). Nevertheless, Levenson, Willis and Prescott [13] found that sex offenders had more than 3 times the odds of child sexual abuse, nearly twice the odds of physical abuse, 13 times the odds of verbal abuse, and more than 4 times the odds of emotional neglect and coming from a broken home. Multiple maltreatments often co-occurred with other types of household dysfunction, suggesting that many sex offenders were raised within a disordered social environment.

Regarding child abusers' personality characteristics, there is no clear consensus. Personality characteristics of child molesters have been usually studied comparing their characteristics with those of adult sexual offenders, other types of delinquents or control samples. These studies have not found strong support for differential personality characteristics, and are unable to find a defined personality pattern for sexual abusers compared to other groups [14]. In a review on personality disorders in sexual delinquents Davis and Archer [14] concluded that most studies were conducted under a psychopathological perspective. 33 of the 37 (89.1%) studies reviewed used versions of the *Minnesota Multiphasic Personality Inventory* (MMPI), and an additional 8.1% the different versions of the Millon Clinical Multiaxial Inventory [15]. Several Works have found a higher level of psychopathy for sexual offenders [16], although this higher level could be related to a criminality general predisposition, more than to a direct tendency to sexual crime [14]. Recently, Babchishin, Hanson and VanZuylen [17] found in a meta-analytic review that sex offenders against children and mixed offenders (offenders with both child pornography and contact sex offences against children) were found to score higher on indicators of antisociality than online child pornography offenders. The findings suggest that offenders who restricted their offending behavior to online child pornography offences were different from mixed offenders and offline sex offenders against children, and that mixed offenders were a particularly high risk group.

Abusive alcohol and other substances consumption is also present among the child sexual offenders [18]. Prentky, Knight and Lee [19] assessed 157 child sexual abusers and they stated that a subgroup was characterized by an antisocial and criminal behavioral history, high level of psychopathy, low social competence and poor interpersonal abilities. The results based on MCMI scores have found some heterogeneity among the child abusers. Other authors [20] spoke of higher scores in thought disorder or SS scale in the MCMI-II, which describes a syndrome of strange, fragmented,

desensitization and dispersed thoughts, lower levels in the desirability, phobia, dependency and compulsive scales in the MCMI-II. The study by Ortiz-Tallo, Sánchez and Cardenal [21] found that child sexual offenders had less personality disorders and personality traits dependent, phobic and compulsive. By contrast, adult sexual offenders had personality traits associated to antisocial behavior, compulsive, dependent and borderline personality.

Three quarters of the offenders identify themselves as heterosexual, although extra-familial or mixed abusers (abuses made in both the family and external to the family contexts) identify themselves more likely as homosexual or bisexual [22].

We may say that theoretical models attribute a relevant role in sexual abuse to personality factors. Nevertheless, empirical research has presented non-conclusive results.

There have been proposals for classification of child sexual offenders based on motivation, intentionality, and psychodynamic aspects or personality, and these proposals aim to explain the drive of an individual to abuse a child. Howell [23] classifies child abusers into primary abusers and secondary or situational abusers. Primary abusers would show a sexual inclination almost exclusive for children, and their compulsive behavior is independent of their personal situation. Clinically, they are pedophiles with specific cognitive distortions: They consider their sexual behavior appropriate (they do not feel ashamed or guilty), plan their actions, may eventually attribute their behavior to a seduction effect by the child, or justify the abuse as sexual education of the child. They also usually remain single, and if they marry and/or have heterosexual relations, it is as a cover or in order to gain access to the children. Victims of this type of abusers are commonly boys. Secondary or situational abusers are characterized by a behavior inducted by loneliness or stress: the sexual abuse is a means to compensate for low self-esteem or liberate their hostility. Strictly speaking, they are not pedophiles, as their sexual tendency is towards adults, with which they usually maintain difficult relations (for example, occasional impotence). This type of abusers only occasionally turn to children and they do it in a compulsive way, and perceiving their behavior as inappropriate and feeling guilty and ashamed. Their developmental pattern and their social skills are almost normal, although

they have some lack of skills in their intimate relations. They are more likely heterosexuals.

In Groth's typology [24], based on Freudian assumptions about offender psycho-sexual maturity, the classification criteria are the level of violence used by the abuser, and distinguishing two aspects: the seduction and the physical violent behavior (which includes the level of produced harm). This typology classifies child molesters into fixated and regressed offenders.

There are a number of other typologies that increase the factors to classify. For example, Knight and Prentky [25] proposed a typology of child offenders based on two axis. First axis would include two constructs: fixation (intensity of sexual fantasies with children) and social competence (social success). Second axis is referred to the degree of contact between abuser and abused child. Crossing these two axis leads to subtypes of sexual molesters.

These classifications or typologies nevertheless come with difficulties, among others that deal with motivational variables that cannot be directly observed, and in the forensic evaluation present a strong motivational distortion bias. In front of these shortcomings some classification systems have been based on the frequency and similarities of abusive behaviors. These typologies are therefore empirical and not theoretical or motivational, and they allow to establish which abusive patterns are more likely to occur under certain circumstances. In other words, they may predict which abusive behaviors are expected, what evolution is more likely in offender's behavior, and accordingly help to prevent future risks and orientate interventions.

One of the fundamental basis for this model is that offenders will show a certain consistency between their criminal behaviors and the characteristics they exhibit in other circumstances. This is a fundamental difference with psychological models who try to explain criminal behavior as a consequence of psychological deficits. A line of research is to create typologies studying a large number of proved criminal acts and the people who did them to see if certain type of people are more likely to exhibit certain criminal behaviors [26]. From this point of view, in order to analyze criminal behavior and generate typologies of sexual criminal multidimensional scaling methods have been proposed, representing behaviors and personal characteristics into (usually) two-dimensional space [27,28].

From this perspective, literature on children sexual abuse suggests that there are, at least, three different types of interactions between abuser and the abused child [1]. Each of these types are characterized by criminal behaviors, specific actions that run together with different types of interactions that have into account situational and interpersonal aspects. The key hypothesis is that criminal actions stick together within each of the abusers' types (typologies), and is less likely in the other types (within group homogeneity and between groups heterogeneity). These three types of abusers would have behavioral patterns, namely: intimate, aggressive and criminal-opportunist.

- Behaviors such as showing of affection, gifts or privileges' promises, kisses, desensitization-approximation activities to sex with the child, and oral sex on the child would be characteristics of the intimate pattern.
- Aggressive pattern would be defined by violence not stopped by the reaction of the victim, abusive and offensive language at the offense, use of force, and anal sex on the child.
- The criminal-opportunist pattern would be characterized by a drug-addicted offender, unknown to the victim, vaginal penetration, and an aggression outdoors.

Current research aims to understand if the type of criminal behavior is relevant for psychological classification. In other words, it is assumed that the offender, and any criminal, commits a crime congruently with his stable personal characteristics, including his personality, and he adapts his behavior as a function of the situation and the responses from the victim. Accordingly, the first aim of this research was to empirically identify subgroups of child sexual abusers based on the abusive behaviors perpetrated on the children. The second aim was to relate psychological characteristics to these different subtypes of offenders.

2. MATERIALS AND METHODS

2.1 Sample

A retrospective sample of 206 final guilty verdicts to male offenders, 18 years old or over, judged for child sexual offences. Among them, 74 were psychologically assessed in the Institute of Legal Medicine of Aragon (Spain) between the years 2005 and 2013. Additionally to this 74 offenders with full psychological assessment other 132 final

guilty verdicts for child sexual offences from the General Council of the Judiciary database (http://www.poderjudicial.es/search/indexAN.jsp), dictated between 2009 and 2013. Convicted women were excluded from the study given their low frequency. In the same vein, verdicts involving aggressors under 18 years were also excluded.

2.2 Instruments

The protocol was fully anonymous and it received the approval of the head of the Institute of Legal Medicine of Aragon, following the requirements for data protection and ethics in human research. It includes measures of socio-demographic variables, psychological measures and 23 abusive behaviors. These abusive behaviors were obtained from Canter, Hudges and Kirby's (1998) typology of patterns of child sexual abuse. Several other variables were also included after a review of the strategies for abuse identified in the literature [29,30]. Abusive behaviors so frequent that had no potentially discriminant power among abusive patterns, such as touching of genitals, were not included.

Table 1. List of abusive behaviors

1. *IN1= Affection and language to reassure the child*
2. *IN2= Promise gifts or privileges*
3. *IN3= Mouth kissing*
4. *IN4= Desensitization to sexual behaviors (videos, photos, games ...)*
5. *IN5= Oral sex by offender*
6. *OP1= Offender intoxicated by drugs*
7. *OP2= Offender intoxicated by alcohol in the attack*
8. *OP3= Unknown abuser*
9. *OP4= Vaginal penetration*
10. *OP5= Outside location*
11. *AG1=Offender no deterred by victim reaction*
12. *AG2= Sexual/abusive language*
13. *AG3= Use of force or threat to ensure the secrecy*
14. *AG4= Anal penetration*
15. *Oral= Oral sex by child*
16. *Engaño= Aproximation by deception*
17. *Ataque= Attack by deception*
18. *Excesoviol= Violence beyond need to perform the abuse*
19. *Traslado= Moving the child*
20. *Penetraagresor=Child forced to penetrate the aggressor*
21. *Ojos= Blindfold the victim*
22. *Digital= Digital penetration (anal or vaginal)*
23. *Arma= Weapon or object used to intimidate*

Personality variables were measured using the Milton Clinical Multiaxial Inventory [15]. In order to make scores comparable, prevalence was used. The psychopathy score was assessed using the Hare Psychopathy Checklist-Revised (PCL-R, Hare, 1991) [31]. Pedophile tendency was assessed using the Screening Scale for Pedophilic Interest (SSPI) [32], a four-item scale of sexual behaviors, based on child sexual offenses. This index has been considered adequate to measure sexual arousal in front of kids when contrasted with phallometric assessment and recidivism with violent sexual assaults [32,33]. SSPI applied in adult child abusers has shown association with sexual interest towards children and negative correlation with sexual interest towards adult women. In another study with the SSPI, family abusers score lower in sexual perverted interest than extra-familiar abusers [34].

2.3 Procedure

For each case, content relative to proven facts (abusive behavior) were processed in order to obtain patterns: each one of the 23 abusive behaviors were codified for each case as 1 (present) or 0 (absent). Multidimensional scaling (PROXSCAL method) has been used aiming to replicate the three types of abusive patterns found by Canter, Hughes and Kirby [1]. Multidimensional scaling has been used to find patterns of bullying [35], patterns of sexual aggression [36], pedophilia [1,37] or patterns of pyromaniac behaviors among young [28]. Additionally, the relationship between the patterns elicited by the multidimensional scaling and personality characteristics has been statistically analyzed with correlation coefficients, Analyses of Variance (ANOVA) and chi-square tests, depending on the nature of the data. These analyses have been complemented with effect sizes measures as recommended by the American Psychological Association. All statistical analyses were performed in SPSS 20.

3. RESULTS

3.1 Descriptive Results

Sample is composed of 206 participants, all men, with a mean age of 42.2 years (SD = 15.1). With respect to their nationality, 67.9% were Spaniards, 20.8 Latin Americans, 6.6% come from North-African countries, 3.8% from other countries of the EU, while the remaining 0.9% from other countries. Most subjects had a

partner: 39.2% married, 21.6% civil partnership. Other marital status was as follows: 30.1% singles, 7.8% divorced, and 1.3% widowers.

With regard to the relationship between victim and abuser, 18.5% were the biological father (with the exception of an adoptive father), 29.3% were acquaintances, neighbors or family friends, 16.6% other relatives of the victim, 16.6% were unknowns to the victim, 10.7% were mothers' partner, 5.8% were in the same sportive context of the victim (clubs, gyms, etc.), 1.9% were in the school context.

Fig. 1 shows frequencies of occurrence of the various abusive behaviors. Most frequent abusive behaviors approximation using deception (61.2%), displays of affection and language to reassure the child (48.5%), mouth kissing (56.3%), but also instrumental violence (46.1%), and abusive and offensive language at the offense (43.7%). Least frequent behaviors were: offender under the influence of addictive substances (2.4%) or alcohol (10.2%), blindfolding the victim (1.5%), forcing the child to penetrate the aggressor (3.9%), or using a threatening object (4.9%).

3.2 Multidimensional Scaling

PROXSCAL is a statistical instrument that calculates the correlation / association between variables and then places each variable on a spatial map. A two-dimensional solution adequately represented the pattern of behaviors. This solution was compatible with the typology (patterns) found by Canter, Hughes and Kirby (1998) in British samples. The stress of the MDS measures the goodness of fit in the configuration or dimensions in relation to observed data, and the lower value in the fit-measure, the more accurate the configuration is in relation to the data. A good fit is considered to be between 0 and 0.15 (Stalans, 1995). In this case, the value is lower than 0.13. Tucker's Coefficient of Congruence (TCC) measures the relationship between the independent and criterion variable. The closer to 1 (starting at 0) the better the MDS predicts the relationship. A value between .85-.94 is considered as a fair similarity, while a value over .95 implies that the two factors or components evaluated can be considered to be equal (Lorenzo-Seva & ten Berge, 2006). Current TCC was 0.99. The two-dimensional map may be seen in Fig. 2. As can be seen, the grouping of behaviors into the three patterns was pretty clear. This was especially true in the first

dimension, in which the behaviors of the intimacy pattern were located towards the highest values and opposite to aggressive behaviors, with the criminal-opportunistic relatively in the middle, but closer to the aggressive one.

Coming into the detail of particular behaviors, IN1 (affection), IN2 (promise gifts), IN3 (kissing), IN4 (desensitization) and IN5 (oral sex by offender) proposed by Canter Hughes and Kirby (1998), together with approximation using deception and approximation using deception, grouped together and they belong to the intimate pattern. The pattern of aggression is delimited by close behaviors such as AG1 (offender no deterred by victim reaction), AG2 (sexual/abusive language) and AG3 (use of force o threat) and anal penetration, with the latter also close to the criminal-opportunistic pattern. Although excessive violence was expected to be very close to other aggressive behaviors, it was clearly closer to behaviors typical of the criminal-opportunist pattern. And the same happened with using threatening object, moving the child, and blindfolding the victim. Oral sex on the abuser was equally close to both aggressive and criminal-opportunistic patterns. Overall the location of the behaviors in the bi-dimensional map reflected three clusters of behaviors that resemble the three patterns of abusive interaction with children proposed by Canter, Hughes and Kirby [1]. Nevertheless, there was some overlap between some behaviors in the aggressive and criminal-opportunistic pattern and Aggressive patterns, a situation that does not occur in the intimate behaviors.

Once the typology was validated, we generated three new variables comprising the number of behaviors of each of the patterns each sexual offender used in their abuses. Additionally, subjects were classified as intimate, aggressive or criminal-opportunistic abuser if and only if his score was higher than the third quartile (Q3) in one of the patterns and lower in the other two patterns. The number of groups the crossing of this classification made appear was six: intimate pattern; criminal-opportunistic pattern, no pattern; aggressive pattern; aggressive and criminal-opportunistic; and others. The "others" group was necessary because otherwise sample size of residual combinations was too low for statistical analyses.
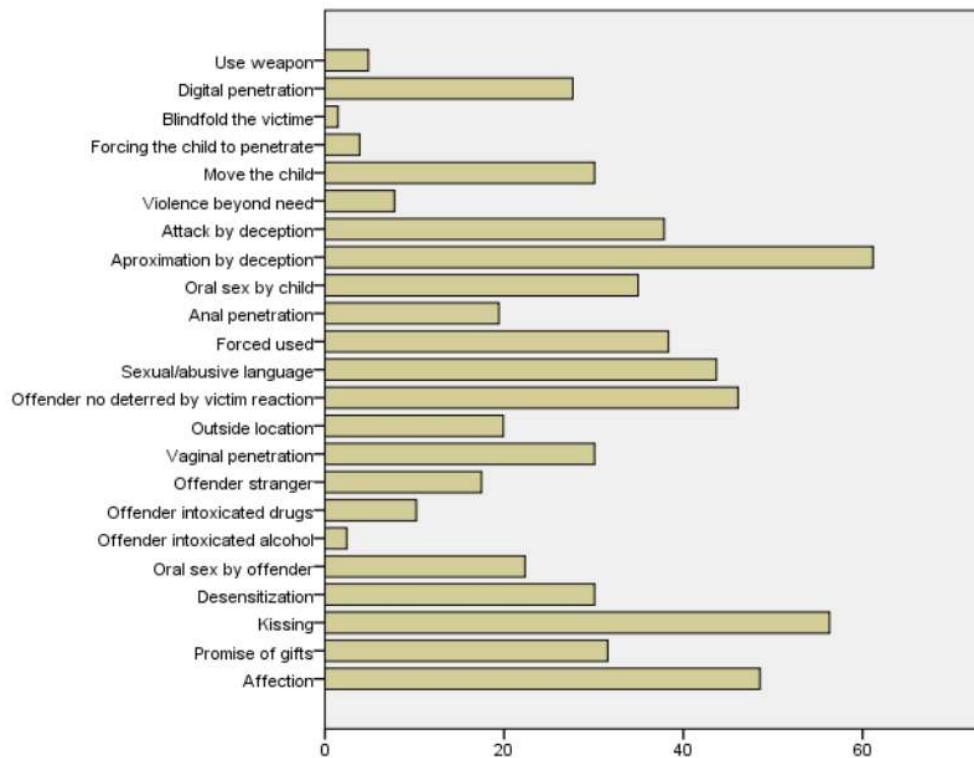

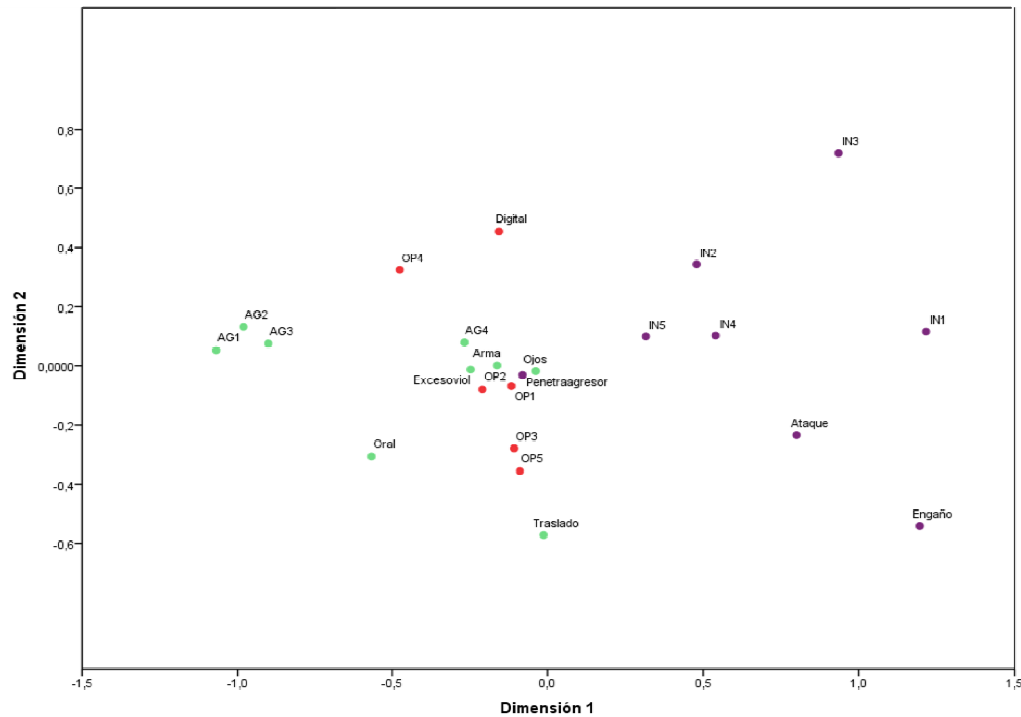**Fig. 1. Percentage of abusive behaviors**

Fig. 2. Two-dimensional space

Frequency of occurrence for each group was as follows: Intimate (25.7%), aggressive (20.4%), non-defined pattern (21.4%), hybrid aggressive-opportunistic (12.1%), hybrid criminal-opportunistic (9.7%) and a 10.7% were classified into the group with other minority abusive patterns.

3.3 Relations among Intimate Pattern and Psychological Dimensions

Correlations among the personality traits and the number of behaviors in the intimate pattern were calculated, and there were a number of statistically significant ones. The significant correlations between the number of behaviors and personality were: with phobic-avoidant (r = .391, p < .01); depressive (r = .387; ;< .01); dependent (r = .488; p < .01); anxiety (r = .364; p < .05); and neurosis (r = .254; p < .05).

The intimate pattern was also related to the presence of any diagnosis in I Axis, and there was no significant relation ($F(5, 100)= 1.832$; $p = .114$; $\eta^2 = .088$). Similarly, intimate pattern behaviors were not related to cognitive impairment ($F(1, 96)= 1.950$; p = .166; $\eta^2 = .020$), psychiatric antecedents ($F(1, 79)= 2.585$; $p =$

.112; $\eta^2 = .032$), pedophilic tendencies (r = .105, p = .149) or other paraphilia ($F(4, 75)= 0.691$; $p = .600$; $\eta^2 = .037$).

However, there were significant relations with some addictive behaviors. Particularly, the intimate pattern was related to consumption of psychoactive substances ($F(1, 119)= 9.040$; $p = .003$; $\eta^2 = .071$), habitual alcohol consumption ($F(1, 80)= 25.113$; $p = .001$; $\eta^2 = .241$), and alcohol consumption prior to the abuse ($F(1, 126)= 11.376$; $p = .001$; $\eta^2 = .083$). In these relations were, larger means of intimate pattern behaviors were associated to not having addictive behaviors. Finally a significant relation was found between Hare's psychopathology scale and the intimate pattern ($r = -.536$, $p = .001$).

3.4 Relations among Aggressive Pattern and Psychological Dimensions

In the same vein as with the intimate pattern, the aggressive pattern behaviors were correlated with personality traits measured by the MCMI. Again a number of significant and pretty large correlations were found, as those with: narcissism (r = .491, p < .01); antisocial (r = .532,

p < .01); aggressive/sadist (r = .467, p < .01); paranoid (r = .326, p < .05); and delirious (r = .250, p < .05).

When relations were studied between aggressive pattern behavior and psychiatric diagnostics in I Axis, they result in non-significant differences (F(5, 100)= 1.027, p = .406; η^2 = .051). Similarly, there were no differences in the aggressive pattern depending on having cognitive impairment (F(1, 96)= .044, p = .950; η^2 = .000). However, there was a relatively small but significant difference, with a lower mean in aggressive behaviors for those with psychiatric antecedents (F (1, 79)= 6.222, p = .015, η^2 = .074).

No significant relations were found among pedophilic tendency (r = -.091, p = .221) or other paraphilia (F(4, 75)= .255, p = .905; η^2 = .014) and the number of aggressive behaviors, but the later was positive, and significantly related with psychopathy (r = .714, p< .001).

3.5 Relations among Criminal-opportunistic Pattern and Psychological Dimensions

Finally, personality was related to the behaviors in the criminal-opportunistic pattern, and some correlations, again, were statistically significant. In this particular pattern those with: narcissism (r = .280, p < .05) and antisocial (r = .328, p < .01).

Criminal-opportunistic pattern was not significantly related neither to diagnostics psychiatric prior diagnosis (F(1, 79)= 0.133, p = .716; η^2 = .027) nor with cognitive impairment (F(1, 96)= 1.931, p = .168; η^2 = .020). When related to addictive behaviors the criminal-opportunistic pattern did not show a significant relation to alcohol consumption (r = .106, p = .372), drugs abuse (r = .218, p = .064), or habitual alcohol consumption (F(1, 80)= 2.443, p = .122; η^2 = .030). In contrast, alcohol consumption prior to the abuse was significantly related to the criminal-opportunistic pattern (F(1,126)= 42.397, p = .001, η^2 = .253), with a larger mean for those who consumed alcohol.

A statistically significant and negative relationship between scores on the pattern and pedophile trend was also found (r = -.150, p = .038). Contrary to this significant there were no differences in the pattern depending on: having other paraphilia (F(4,75)= 0.525, p = .718; η^2 = .029) or psychopathy (r = .232, p = .055) .

3.6 Qualitative Patterns and Psychological Dimensions

As already mentioned the PROXSCAL solution allowed us to develop a typology of six different patterns of abuse: Intimate, criminal-opportunistic, aggressive, aggressive and criminal-opportunistic, no pattern, and other combinations. Only abuser that score high in one of the types and not in the others were analyzed.

These six patterns were related to personality traits, and some significant results were found that were in accordance with the hypotheses, such as a higher score in the avoidant/phobic scale (F(5,72)= 2.716, p = .027, η^2= .168) for the intimate pattern (Mean = 46.96) when compared to the aggressive one (Mean = 21.53). Results also shown a significant relation between the typology and the dependent personality scale (F(5,72)= 4.449, p = .001, η^2 = .249). Post-hoc tests pointed out significant mean differences between the intimate pattern (Mean = 58.40) and the aggressive one (Mean = 28.68). There were also differences on narcissism (F(5,72)= 7.481, p = .001, η^2 = .358), and a higher mean for the aggressive pattern (71.63) and the combined aggressive-opportunistic pattern (79.89) compared with the intimate pattern (46.96). The results for the antisocial scale ran in the same line (F(5,72)= 5.362, p = .001, η^2 = .286). Pairwise comparisons shown again that intimate abuser scored lower (31.56) than aggressive (59.11) and aggressive-opportunistic (79.89). Patterns were significantly related to aggressive/sadist scale (F(5,71)= 3.832, p = .004, η^2 = .225), and post-hoc comparisons found differences between the intimate pattern (Mean = 29.46) and the aggressive-opportunistic pattern (Mean = 60.89). Finally, pattern was marginally related with the depressive neurosis/dysthymia (F(5,72)= 2.297, p = .055, η^2 = .146), with the post-hoc test pointing out significant differences of intimate versus aggressive patterns (means of 51.64 versus 24.32).

Nevertheless several hypotheses were not supported by the data as no significant differences were found. Specifically, there were no differences in: schizoid scale (F(5,72)= 0.656, p = .658; η^2 = .047); depressive (F(5,72)= 1.549, p = .185; η^2 = .173); histrionic (F(5,72)= 0.620, p = .685; η^2 = .044); compulsion (F(5,72)= 0.706, p = .622; η^2 = .050); anxiety (F(5,72)= 2.135, p = .072; η^2 = .137); psychotic thinking (F(5,72)=

1.001, $p = .424$; $\eta^2 = .070$); and psychotic delusion($F(5,72) = 0.573$, $p = .720$; $\eta^2 = .041$).

With regard to the relationships among the typology and psychiatric diagnosis or cognitive impairment, analyses found no significant evidence ($\chi^2(25) = 26.173$, $p = .398$ and $\chi^2(5) = 3.621$, $p = .605$, respectively), but the relation with psychiatric antecedents was significant ($\chi^2(5) = 11.636$, $p = .040$, $V = .381$), and there were a greater percentage of criminal-opportunistic abusers with such antecedents (57.1%) compared with percentages in the intimate pattern (23.1%) and aggressive (9.1%).

Substance abuse was also related to the six patterns, and results revealed that certain patterns were more likely than others to substance abuse ($\chi^2(5) = 34.885$, $p = .001$, $V = .539$), regular alcohol consumption ($\chi^2(5) = 19.028$, $p = .002$, $V = .485$), and alcohol consumption prior to sexual abuse ($\chi^2(5) = 30.521$, $p = .001$, $V = .490$).Aggressive-opportunistic pattern was the most likely to consume substances (63.6%) followed by the criminal-opportunistic with 18.2%, while no intimate abuser was found to consume. Similarly, alcohol consumption was also the least likely in the intimate pattern, either on regular basis (34.6%) or prior to the abuse (5.7%), while opportunistic and opportunistic-aggressive were more likely to consume alcohol (30.8 and 73.3%, respectively).

To end this, no relation was found between the patterns and pedophilic tendencies ($F(5,190) = 1.336$, $p = .251$; $\eta^2 = .035$) or other paraphilia ($\chi^2(20) = 20.738$, $p = .413$), but there was a significant relation with the psychopathy scale ($F(5,68) = 14.508$, $p = .001$, $\eta^2 = .535$). Pairwise mean comparisons on this last variable shown that almost all groups (patterns) were statistically different: opportunistic-aggressive (Mean = 25.44); aggressive (Mean = 24.88); others (Mean =14.50); no pattern (Mean =12.57); intimate (Mean =10.88); and criminal-opportunistic (Mean = 9.60).

4. DISCUSSION

All sexual assaults against children start as an attempt to control the victim, so as to allow the abuser to obtain some form of sexual gratification without being interrupted. Main differences between abusers are in the way victims are contacted and controlled, and the implicit or explicit relations maintained with the victims. These results, based on the proximity and co-occurrence of abusive behaviors, confirm the three patterns of sexual abuse: intimate, criminal-opportunistic and aggressive.

The intimate pattern seems clearly delimited from the other two (aggressive and criminal-opportunist) with almost no overlap with the other patterns' behaviors. It is integrated by behaviors characterized by signs of intimacy and affection, and a style of deception and seduction of the victims. Behaviors that make up this pattern are relatively sparse, with the aggressor giving oral sex to the victim being the least frequent behavior, and at the same time the one closer to the criminal-opportunistic cluster of behaviors, which suggest that within this pattern, there may be a sub-group of abusers more motivated for sexual activity than for the most common non-sexually intrusive and focalized in the intimacy behaviors. Some proximity among explicitly genital behaviors with intimate behaviors for some abusers in this pattern was also found by Bennell [37]. The fact that relation between intimate abusers tend towards continued abuse may also have something to do with the approximation to explicitly sexual behaviors.

This research has no controlled variable for abuse duration, but it could be suggested as a step forward in future research to test if long-lasting intimate abuses include sexual behavior with greater probability. A number of personality characteristics have been related to intimate pattern: avoidant/phobic tendency, emotional dependency, and to a lesser extent depressive. A weaker relation has been found among this pattern and anxiety and depression, and less psychopathy, a pattern that relates intimate violence with the secondary/situational abuser or Groth's regressive abuser. Becerra, García, Muela and Egan [38] suggest that offence type is useful for differentiating offenders, and that Neuroticism and Openness traits are most influenced by a history of childhood abuse.

Researchers have suggested that child sex offenders hold distorted views on social interactions with children. Misinterpreting children`s behavior and intentions could lead to sexually abusive behavior toward children. It is further suggested that the interpretation process is influenced by offenders' offense-supportive cognitions and levels of empathy. Recently, authors [38] found that cognitions that justify sexual offence against children seem to diminish

the threshold for sexual assault by assigning more cooperation and willingness of the victim in a child molestation incident, which favors the secret [39].

The aggressive pattern was characterized by using violence, using strength and threats to keep the secret, sexually explicit and offensive language, anal penetration. The other behaviors hypothesized to be included in this pattern were closer to the criminal/opportunistic one. With respect to personality traits, this pattern was positively associated with narcissism, antisocial behavior, aggressive/sadist, paranoid, psychotic delusion, and psychopathy. It was also related to police record for non-sexual crimes, and severity of physical aggressions. Hence, this abusive pattern has a life style related to crime in its different modalities. Other authors have also found higher non-sexual violent crime rates among this type of criminals [40].

Criminal-opportunistic pattern has lower frequency behaviors, including those hypothesized to this pattern (offender under the influence of alcohol/addictive substances, unknown offender for the child, vaginal penetration, and outdoors aggression) as well as digital penetration included in this research for the first time. This type of abuser results suggests the existence of narcissist, antisocial, marginally psychopathic traits, in which alcohol seems to perform a disinhibiting role. Furthermore, this pattern had a larger probability of psychiatric antecedents, together with substance abuse, which suggests a more unstable pattern from a psychological point of view, a positive tendency to alcohol consumption prior to the abuse, and a negative relation with pedophilic tendencies. From a visual analysis of the results, it follows that there is some overlap between aggressive and criminal-opportunist patterns, which it is not the case with the intimate pattern. Some explicit sexual behaviors, and of a high degree of intrusiveness on child sexual indemnity, were present in both aggressive and criminal-opportunistic patterns. This proximity points out that both patterns have much in common, as already pointed by other authors [1].

Elaborating on the common aspects of the aggressive and criminal-opportunist patterns in subsequent analysis of the qualitative patterns, a fourth pattern of subjects was found that meets mixed characteristics of aggressive and criminal-opportunist, also mentioned by Canter, Hudhes and Kirby [1]. This "fourth" pattern had narcissist,

antisocial, and aggressive-sadist characteristics, even more than the aggressive pattern, as well as more abuse of substances and alcohol prior to the crime, and higher levels of psychopathy. It is a pattern with a higher nonsexual criminal history. Other authors have also found more violence in sexual child abuse, greater recidivism and criminal history, than in other types of abuses, all related with psychopathy level, although modulated by intelligence [41].

Efforts are being made to identify subgroups of child molesters, to develop differentiated preventive and therapeutic strategies. Wortley and Smallbone [42] conducted a study on the official records of 362 convicted offenders, 213 of whom also provided confidential self-report data on their personal and offending histories. Forty-one percent of the sample was currently serving sentences for their first sexual offense conviction(s) but had at least one prior conviction for a nonsexual offense (limited/versatile); 36.4% had no previous convictions of any kind (limited/ specialized); 17.8% had prior convictions for sexual and nonsexual offenses (persistent/ versatile); and 4.8% had prior convictions for sexual offenses only (persistent/specialized). These four groups differed on a range of personal and offense-related variables, including abuse histories, sexual orientation, age at first sexual contact with a child, number of victims, duration of sexual involvement with victims, victim's gender, and whether victims were familial or nonfamilial. These differences suggest the need to adopt different treatment and prevention strategies that target the specific characteristics of each group. Differentiation is also necessary for the assessment of differentiated types of behavior risks and characteristics of the child sexual abuse [43]. Noted that the existence of possible differences in criminological characteristics and normal personality traits for child molesters from two different cultures whereas the nature of the offences is compatible [44].

It is worth noting that when the overall sample of abusers was analyzed, the personality traits measured by the MCMI were within the normal range of scores. This is in line with some other studies that found no differences among abusers and general population in personality. However, results on abusers' personality characteristics point out towards overdispersion of the scores, which suggests that it is a very heterogeneous population, in line with other results [45]. And indeed, the significant differences in personality

become evident when analyzed in terms of abusive behavior.

This paper also has some limitations, for example, possible bias towards more severe abusive behaviors, relies largely on court rulings. It would be also interesting to add some other abusive behaviors to enrich the analyses. Finally, the inclusion of variables related to children behaviors when abused, their reactions, would be of the greatest interest to understand the abusive dynamics.

5. CONCLUSION

Results on abusers' personality characteristics suggest it is a heterogeneous population, but the significant differences in personality become evident when analyzed in terms of abusive behavior. Current results suggest that the type of crime (child sexual abuse) is not clearly classified in terms of personality characteristics, but it is the pattern of sexual abuse that makes the difference.

In a nutshell, the results of current work support the possibility to identify different patterns of objective behaviors among the abusers, through judicial or police documentation, as well as the existence of psychological characteristics that correlate with these patterns, which ultimately may improve forensic assessment.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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