



# Adolescents Adjudicated for Sexual Offending: A Comparison Between Sex-Only and Sex-Plus

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## Abstract

**Introduction** One of the most consolidated classifications of adolescents adjudicated for sexual offending (ASO) is based on their antisocial behavior background. This allows identifying sex-only and sex-plus ASO. However, limited research related to this classification has been focused on relevant risk factors, such as sexual development, and none of them has been conducted in Spain.

**Methods** A cross-sectional study was carried out with a sample of 73 ASO. Data collection took place between 2013 and 2015. They were divided into sex-only ( $n = 33$ ) and sex-plus ( $n = 40$ ). Assessments included reviews of official files, interviews with professionals in charge, and interviews with the ASO. Descriptive and inferential analyses were conducted to compare intergroup differences.

**Results** No significant differences between groups in family background, history of maltreatment, and sexual development variables were found. Sex-plus had a significantly higher prevalence of disruptive behavior at school, school absenteeism, substance consumption, and antisocial misconduct with peers. Significant differences between groups were also found in some sexual crime variables. Logistic regression analyses showed that antisocial behavior with peers and school absenteeism were related to sex-plus.

**Conclusions** These findings highlight the importance of assessing sexual development and family background when intervening with ASO. Sexual development-related variables should be further examined to understand their involvement in sexually coercive behaviors.

**Policy Implications** The identification of specific criminogenic needs for each offense pathway would benefit court decisions and more tailored interventions to reduce recidivism. These treatments should include family interventions.

**Keywords** Adolescent sexual offending · Sexual development · Maltreatment · Risk factor · Typology

## Introduction

Adolescents adjudicated for sexual offending (ASO) are a relevant focus for researchers and clinicians as well as for the community. In Spain, official reports estimate that the sexual offenses committed by adolescents constitute approximately 8% of the total annual rate of sexual offenses (Ministerio del Interior, 2018). Data from European studies indicate rates

between 5 and 24% (Margari et al., 2015), while in North America ranges from 14 to 18% (Pullman et al., 2014). In recent years, sexual violence has become an important public health issue. However, limited policies have been developed in Spain to improve prevention, assessment, and treatment, particularly so with regard to ASO.

Two different perspectives have been developed to explain adolescent sexual offending. The generalist perspective considers that ASO have more similarities than differences with other juvenile delinquents (Letourneau & Miner, 2005; Pullman & Seto, 2012). However, even though adolescent sexual and nonsexual offenders might share certain risk factors, juvenile delinquency should not be assumed to be homogeneous. It is essential to identify the specific characteristics that are linked to the specific offense types to provide an adequate interpretation of each behavior.

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On the other hand, the specialist perspective has been also suggested to explain sexually abusive behavior among adolescents (Seto & Lalumiere, 2010). This approach considers that ASO differ from other juvenile nonsexual offenders on variables that are theoretically important in the development of sexual offending (Kjellgren et al., 2010; Pullman et al., 2014). The mentioned factors are those regarding psychosexual development, sexual victimization history, maltreatment history, atypical sexual interests, and some family and environmental aspects (Kjellgren et al., 2010; Pullman & Seto, 2012; Seto & Lalumiere, 2010).

The generalist model is useful but not sufficient to explain the sexual violence perpetrated by adolescents (Goulet & Tardif, 2018). Hence, the specialist perspective is required to identify the risk factors that explain why an adolescent commits a sexual rather than a nonsexual crime (Kjellgren et al., 2010; Pullman & Seto, 2012). Most of the research on adolescent sexual offending has surprisingly overlooked specific risk factors related to their sexual development. Hence, leaving unattended specialist explanations would maintain an incomplete analysis of the sexual violence.

## ASO Classification Criteria

It is well established that ASO are a heterogeneous population (Aebi et al., 2012; Cale et al., 2016; Van Wijk et al., 2007; Way & Urbaniak, 2008). Researchers have made a major effort to elaborate ASO classifications to develop theories, to identify etiological factors, to design specialized interventions, and to assess the risk of recidivism (Fox & DeLisi, 2018; Rajlic & Gretton, 2010). Most of these ASO classifications—influenced by adult typologies—have been developed taking into consideration their personality characteristics (Oxnam & Vess, 2008; Richardson et al., 2004; Worling, 2001), the number of offenders (Hart-Kerkhoffs et al., 2009; Kjellgren et al., 2006), the type of sexual offense—mostly related with victims' characteristics (Hunter et al., 2003; Prentky et al., 2000)—, or the age of the victims (Gunby & Woodhams, 2010; Hendriks & Bijleveld, 2004; Hunter et al., 2000). However, these classification criteria, particularly those related to victim characteristics, present some limitations. For example, ASO' selection of victims is more mediated by the opportunity than by a conscious election of specific characteristics of the victims (Hunter et al., 2003; Kemper & Kistner, 2007). Moreover, taxonomies of ASO based on victim characteristics are in most cases tautological (Aebi et al., 2012) and have not obtained robust significant differences, so they may not have as much utility (Fanniff & Kolko, 2012; McCuish & Lussier, 2017; Zeng et al., 2015).

One of the most robust classifications is the distinction of ASO according to their history of antisocial behavior

(Butler & Seto, 2002; Cale et al., 2016; Chu & Thomas, 2010; Pullman et al., 2014; Rajlic & Gretton, 2010; Van Wijk et al., 2007; Zeng et al., 2015). According to this criterion, it is possible to identify two categories of ASO: sex-only offenders, who had committed only sexual offenses, and sex-plus offenders, who had committed both sexual and nonsexual offenses. Findings from these studies usually support that both groups have different etiological pathways. It has been suggested that sex-plus offenders exhibit more general antisocial tendencies which can be explained from the abovementioned generalist perspective, while sex-only offenders are driven by specific factors in which the specialist perspective could be applied (Butler & Seto, 2002; Pullman et al., 2014). Consequently, it has been established that sex-plus have different risk factors and criminogenic needs when compared to sex-only offenders (Butler & Seto, 2002; Rajlic & Gretton, 2010; Zeng et al., 2015).

## Specific Risk Factors Related to ASO

One of the most frequently assessed risk factors among ASO is family background and, within this, childhood maltreatment (Yoder et al., 2018). Intrafamily violence (physical victimization, sexual victimization, emotional victimization, or neglect) is commonly reported by ASO (Marini et al., 2014; Siria et al., 2020), with higher prevalence than among adolescent nonsexual offenders (Barra et al., 2018; DeLisi et al., 2017). Although childhood maltreatment and family environment are essential issues to assess, most of the research comparing sex-only and sex-plus ASO are not explicitly focused on these variables (Aebi et al., 2012; Van Wijk et al., 2007; Zeng et al., 2015). Those studies that have addressed childhood maltreatment have concluded that sex-plus had significantly higher rates of having experienced family maltreatment, specially physical abuse, than sex-only (Carpentier et al., 2011; Pullman et al., 2014).

In terms of sexuality-related variables, Seto and Lalumière (2010) were some of the first authors who compared sex-only and sex-plus offenders with encouraging results about the importance of these risk factors. However, subsequent research has paid limited attention to specific sexual developmental factors when assessing ASO and, more specifically, when differentiating sex-only and sex-plus offenders. Most of the research has been focused on sexual victimization during childhood from a limited definition of direct sexual abuse (Friedrich et al., 2003; McCuish & Lussier, 2017; Mohler-Kuo et al., 2014). Hence, the wider spectrum of sexually inappropriate exposure or practices suffered during childhood (e.g., early exposure to sexually explicit material or practices, sexualized family environment) have not been detected (Goulet & Tardif, 2018; Lightfoot & Evans, 2000; Yoder & Precht, 2020). It would be necessary to assess prior sexual development, sexual

experiences, sexual interests, and sexual behavior to define ASO types more precisely (Goulet & Tardif, 2018; Levesque et al., 2012; Van Wijk et al., 2006) as recent studies have evidenced the importance of these processes among this population (Siria et al., 2020).

## The Current Study

The classification of ASO between sex-only and sex-plus has encouraging implications, but limited research using this classification has focused on relevant risk factors, such as sexual development, and none of them has been carried out in Spain. Given the above, the main aim of this study was to compare sex-only and sex-plus ASO to examine differential characteristics and risk factors related to each group. General risk factors related to individual, family, and sexual offense characteristics were assessed. Considering the specialist perspective, particular attention has been paid to those risk factors related to sexual development. The secondary aim of this study was to extend the previous international findings in relation to the distinction between sex-only and sex-plus ASO using a Spanish sample.

## Methods

### Participants

The sample consisted of 73 male ASO between 14 and 18 years of age ( $M = 15.68$ ,  $SD = 1.12$ ) who were serving a sentence for committing a sexual offense. Spanish law establishes 14 years as the age of criminal liability for minors. According to the Spanish law, sexual offenses were as follows: sexual aggression—with violence or intimidation—(58.2%), sexual abuse—without violence or intimidation and without victim's consent—(36.3%), child pornography (2.2%), exhibitionism (1.1%), sexual harassment (1.1%), and prostitution and corruption of minors (1.1%). The sample was gathered in various Spanish cities from custodial facilities (72.6%) as well as from community-based programs (27.4%). Of the total sample, 43 participants (59%) were Spanish, and 30 (41%) were of non-Spanish origin.

Sample inclusion criteria were (a) being sentenced for committing a sexual offense between 14 and 18 years of age, (b) voluntary participating in the study, and (c) having the capacity to read and understand Spanish.

The initial sample was composed of 102 ASO but 29 of them (28.4%) declined to participate. They were recruited using convenience sampling due to the limited number of adjudicated ASO in the regions where the study was conducted, as well as the difficulties in obtaining this specific type of sample. The participants were divided into two

groups depending on their previous criminal records or previous criminal conduct even if they were not officially reported. To identify how many times the ASO had previously performed criminal behaviors, information was collected from official files, self-reports, and the professionals in charge (psychologists and social workers).

Thus, the participants were assigned to the sex-only group when they had committed exclusively sexual offenses ( $n = 33$ ), while the group of sex-plus was composed by those ASO who had committed sexual and non-sexual crimes ( $n = 40$ ). Taking into account these criteria, some participants could have only sexual offenses on their official criminal records but still be considered as sex-plus because they had previously committed other non-sexual undetected crimes.

### Assessment Measures

A coding manual was created to collect information from multiple sources. The major categories and variables contained are described below.

**Family Characteristics** Separation from parents during childhood (if an interruption of the relationship between the ASO and one or both parents during childhood occurred for a period of at least 4 months under circumstances of family conflict, death, abandonment, or events such as parents' imprisonment, hospitalization, or child institutionalization), maltreatment history (physical violence, emotional violence, sexual violence, and/or neglect by a family member), exposure to violence towards women in their family environment, living in a dysfunctional household (if the presence of one or more of the following was detected: home instability, many and different people living with the family, habitual changes of caregivers, non-stable adult figures, and habitual family conflict), and Child Welfare System involvement.

**School Progress** School absenteeism and/or dropout, school year repetition (once or more), disruptive behavior at school (violent and nonviolent towards teachers and/or classmates), and the presence of bullying (perpetrated or suffered) at school.

**Psychiatric History and Substance Use** Previous psychiatric diagnosis and regular substance consumption (drugs and alcohol).

**Interpersonal Relationships and Sexual Conduct** Engagement in antisocial behavior with his group of friends, age at first consensual sexual intercourse, consensual sexual intercourses before committing the sexual crime, partner relationship before the sexual crime, and having a partner when committing the sexual crime.

**Sexual Development-Related Variables** Sexually victimized during childhood, early consensual sexual intercourse with a similar-age partner (before age 13), exposure to inappropriate sexual behavior in the family environment during childhood, beginning of pornography consumption at an early age (before age 12), and the presence of deviant sexual fantasies (with violence or with children at least 4 years younger).

**Sexual Offense Characteristics** Age at first sexual crime, type of offense (according to Spanish law), use of physical violence during the offense (instrumental or expressive), crime planning (planned or impulsive), place of commission (public, private, or Internet), and number of offenders (individual or group).

**Victim Characteristics** Victim's age (child [the victim was at least 4 years younger than the offender], peer [up to 4 years younger or older], or adult [the victim was more than 4 years older than the offender]), victim's gender (male or female), previous relationship (family, acquaintance, or stranger).

**Criminal History Information** The presence of previous sexual and nonsexual offenses was obtained from official criminal records, from participants' self-report, and the interviews with the professionals in charge. Previous sexual and non-sexual offenses were coded both when they were officially reported or when, without official records, additional episodes of criminal behaviors were self-reported by the ASO or informed by the professionals in charge. The rationale of measuring criminal reoffending through both adjudicated and non-adjudicated previous offenses is because many criminal behaviors during adolescence are not reported to authorities. This will provide a more accurate approach to the rates of criminal behavior committed by ASO (Siria et al., 2021).

Except for ages, type of offense, place of commission, number of offenders, and victim characteristics related variables, the rest of the variables were dichotomously coded as yes or no.

## Procedure

A descriptive, relational, cross-sectional study was carried out to compare two groups of ASO (sex-only and sex-plus) and to explore the risk factors and sexual crime characteristics.

All of the seventeen Spanish Juvenile Justice System authorities from each Autonomous Region were asked to participate in the study. Of the total number of authorities, seven gave the permission to develop the study and signed a collaboration agreement. Ethical approval for the data collection was obtained separately through the seven Juvenile Justice System authorities. Prior to inclusion in the study, informed consent was obtained from juveniles over 18 years old, and from juveniles' parents or legal guardians when they were under the age of 18.

Once the sample was selected using the previously described criteria, data collection was carried out. Three different sources were used to collect data over three sessions in the following order: (a) a review of the individual case files, (b) an individual interview with the professionals in charge (psychologists and social workers), and (c) an individual semi-structured interview with each ASO. The use of three data sources allowed to collect detailed and contrasted information and saved the ASO from lengthy interviews. Data gathering took place from January 2013 to December 2015.

## Data Analysis

The intergroup differences between sex-only and sex-plus ASO were analyzed using the chi-square ( $\chi^2$ ) test. The effect sizes (ES) were estimated through the Phi coefficient

**Table 1** Family characteristics and background

	Total sample ( <i>N</i> = 73)		Sex-only ( <i>n</i> = 33)		Sex-plus ( <i>n</i> = 40)		$\chi^2$ (1)	<i>p</i>	$\Phi$
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%			
Child Welfare System involvement	32	43.84	9	27.27	23	57.5	6.71	.010	.303
Dysfunctional household	62	84.93	26	78.79	36	90	1.01	.315	.156
Separation from parents during childhood	59	80.82	24	72.73	35	87.5	2.55	.110	.187
Exposure to violence towards women	28	38.36	11	33.34	17	42.5	0.64	.423	.094
Childhood maltreatment	62	84.93	26	78.79	36	90	1.01	.315	.156
Physical	28	38.36	10	30.30	18	45	1.65	.199	.114
Emotional <sup>a</sup>	62	84.93	26	78.79	36	90	1.01	.315	–
Neglect	57	78.08	23	69.69	34	85	2.47	.116	.108

$\Phi$  = phi coefficient (2 × 2 crosstabs). Data indicate the presence of each variable as all the variables were dichotomously categorized (presence/absence)

<sup>a</sup>All the participants with childhood maltreatment had suffered emotional abuse, so the Phi coefficient was not calculated due to the presence of two cells with a value equal to zero

**Table 2** School related, antisocial behavior, psychiatric diagnosis, and substance abuse characteristics

	Total sample ( <i>N</i> = 73)		Sex-only ( <i>n</i> = 33)		Sex-plus ( <i>n</i> = 40)		$\chi^2$ (1)	<i>p</i>	$\Phi$
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%			
School absenteeism	53	72.60	15	45.5	38	95	19.89	<.001	.553
Repetition of school year	62	84.93	27	81.8	35	87.5	0.12	.729	.079
Disruptive behavior at school	54	73.97	18	54.6	36	90	10.04	.002	.402
Violence towards classmates/teachers	45	61.64	14	42.4	31	77.5	9.41	.002	.359
Victim of bullying	18	48.65	12	36.4	6	15	4.44	.035	.247
Bullying perpetrator	19	51.35	4	12.1	15	37.5	4.80	.028	.288
Antisocial behavior with peers	45	71.43	9	27.27	36	90	27.50	<.001	.642
Any psychiatric diagnosis	19	26.03	7	21.21	12	30	0.72	.394	.099
Substance abuse	45	61.64	13	39.39	32	80	12.61	<.001	.416

$\Phi$  = phi coefficient (2×2 crosstabs). Data indicate the presence of each variable as all the variables were dichotomously categorized (presence/absence)

( $\Phi$ ; for 2×2 contingency tables), Cramer's *V*, or odds ratio (OR). Effect sizes for Phi and *V* were interpreted as follows: 0.10–0.29 (small), 0.30–0.49 (medium), and  $\geq 0.50$  (large). Effect sizes for OR were interpreted as follows: 1.68–3.47 (small), 3.47–6.71 (medium), and  $\geq 6.71$  (large) (Chen et al., 2010).

Subsequently, two binary logistic regression analyses (using the Enter method) were conducted to identify the best predictors of ASO group (sex-only and sex-plus). Those variables that exhibited statistically significant differences and the strongest ES in the bivariate analyses were included as independent variables. Sample size was considered in order to select an appropriate number of independent variables. To include the victim age variable in the logistic regression, it was dichotomized as “child” and “peer/adult” victim, because all the participants who had more than one different-aged victims were peer and adult victims. A difference of  $p < .05$  was considered significant. All the statistical analyses were carried out using SPSS 25.0.

## Results

Regarding family characteristics, Table 1 shows that no significant differences were found between groups in terms of dysfunctional household, separation from parents during childhood, witnessing violence towards women, and childhood maltreatment. However, sex-plus had significantly higher rates of Child Welfare System involvement than sex-only offenders.

As can be seen in Table 2, no significant differences were found in terms of school year repetition (both groups repeated at least one year in more than 80% of the cases). Sex-plus offenders had significantly higher rates of school absenteeism, disruptive behavior, violent behavior towards teachers and classmates, and bullying perpetration, whereas being a victim of bullying was significantly higher for sex-only offenders. Regarding psychiatric diagnosis, no significant group differences were found. Finally, sex-plus showed significantly higher rates of substances consumption than sex-only offenders.

**Table 3** Sexual behavior and sexual development variables

	Total sample ( <i>N</i> = 73)		Sex-only ( <i>n</i> = 33)		Sex-plus ( <i>n</i> = 40)		$\chi^2$ (1)	<i>p</i>	$\Phi$
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%			
Previous sexual intercourse	56	76.71	22	66.67	34	85	3.40	.065	.216
Previous partner relationship	67	91.78	28	84.85	39	97.5	2.34	.126	.229
Had a partner when committed the sexual crime	22	30.14	6	18.18	16	40	4.09	.043	.237
Inappropriate family sexual behavior	19	26.03	9	27.27	10	25	0.05	.826	.026
Early pornography consumption ( $\leq 12$ )	51	69.86	20	60.61	31	77.5	2.45	.117	.183
Victim of sexual violence	16	21.92	10	30.30	6	15	2.47	.116	.184
Deviant sexual fantasies	15	20.55	12	36.36	3	7.5	7.54	.006	.356
Early consensual sexual intercourse ( $\leq 13$ )	31	42.46	10	30.30	21	52.5	3.65	.056	.223

$\Phi$  = phi coefficient (2×2 crosstabs). Data indicate the presence of each variable as all the variables were dichotomously categorized (presence/absence)

**Table 4** Sexual crime characteristics

	Total sample ( <i>N</i> =73)		Sex-only ( <i>n</i> =33)		Sex-plus ( <i>n</i> =40)		$\chi^2$ ( <i>df</i> )	<i>p</i>	$\Phi/V$
	<i>N</i>	%	<i>n</i>	%	<i>n</i>	%			
Sexual recidivism									
Yes	34	46.58	20	60.61	14	35	4.76 (1)	.029	.255
No	39	53.42	13	39.39	26	65			
Number of offenders									
One	53	72.60	27	81.82	26	65	2.57 (1)	.109	.188
Two or more	20	27.40	6	18.18	14	35			
Use of physical violence <sup>a</sup>									
Instrumental	38	84.44	20	95.24	18	75	2.12 (1)	.145	.278
Expressive	7	15.56	1	4.76	6	25			
Place of the offense									
Public	31	42.47	11	33.33	20	50	2.08 (3)	.556	.169
Private	34	46.57	18	54.55	16	40			
Both	4	5.48	2	6.06	2	5			
Internet	4	5.48	2	6.06	2	5			
Victim approach									
Planned	33	45.20	20	60.61	13	32.5	5.77 (1)	.016	.281
Impulsive	40	54.80	13	39.39	27	67.5			
Victim gender									
Female	55	75.34	24	72.73	31	77.5	0.63 (2)	.731	.093
Male	15	20.55	7	21.21	8	20			
Both	3	4.11	2	6.06	1	2.5			
Victim age <sup>a</sup>									
Child	31	34.06	22	50	9	19.15	10.11 (2)	.006	.333
Peer	49	53.85	19	43.18	30	63.83			
Adult	11	12.09	3	6.82	8	17.02			
Victim relationship <sup>a</sup>									
Family	16	17.58	7	15.91	9	19.14	1.29 (2)	.524	.119
Acquaintance	42	46.15	23	52.27	19	40.43			
Stranger	33	36.27	14	31.82	19	40.43			

<sup>a</sup>Variables accounted by number of sexual crimes (*n*=91), not by participants: sex-only group included 44 sexual crimes and sex-plus group 47.  $\Phi$ =phi coefficient (2×2 crosstabs); *V*=Cramer's *V*

Concerning sexual conduct, the mean age at their first consensual sexual intercourse was similar for both groups with no significant differences between sex-only offenders ( $M = 13.4$ ,  $SD = 2.10$ ) and sex-plus offenders ( $M = 13.2$ ,  $SD = 1.58$ ). Table 3 shows no statistically significant differences in terms of having previous consensual sexual intercourse and having previous partner relationships.

The majority of the variables related to sexual development did not show significant differences between groups. The unique variable that showed significant differences was the presence of deviant sexual fantasies, which was higher among sex-only offenders.

Sexual recidivism was significantly higher for sex-only offenders (see Table 4). No significant differences between groups were found in relation to sexual crime characteristics except for the crime planning. Sex-only offenders committed

more planned sexual crimes, while sex-plus offenders had higher rates of impulsive sexual offenses.

With respect to the victim's characteristics, no significant differences were found regarding gender and previous relationship. Sex-only had significantly higher rates of child victims, while sex-plus offenders committed their sexual crimes against peer and adult victims in a significantly higher percentage.

To explore which factors were the most relevant to differentiate between sex-only and sex-plus ASO, two logistic regression analyses were conducted (Table 5). The first analysis highlighted significant differences ( $\chi^2 = 46.85$ ;  $p = .000$ ; Cox and Snell  $R^2 = .47$ ; Nagelkerke  $R^2 = .63$ ), and the Hosmer and Lemeshow test indicated a good fit of the model ( $\chi^2 = 10.69$ ;  $p = .153$ ). The model correctly classified 87.7% of the cases (90% of sex-plus and 84.8%

**Table 5** Logistic regression analyses predicting sex-only and sex-plus ASO

	<i>B</i>	<i>SE</i>	Wald	<i>df</i>	<i>p</i>	<i>OR</i>	95% <i>CI</i>
Antisocial behavior with peers	2.39	0.79	9.17	1	.002	10.97	(2.33, 51.68)
School absenteeism	2.35	0.98	5.76	1	.016	10.54	(1.54, 72.10)
Substance abuse	1.07	0.75	2.04	1	.154	2.92	(.67, 12.72)
Disruptive behavior at school	1.23	1.28	0.92	1	.336	3.43	(.28, 42.26)
Violent behavior at school	−1.94	1.02	0.37	1	.848	0.82	(.11, 6.04)
Deviant sexual fantasies	−0.89	1.39	0.41	1	.523	0.41	(.03, 6.30)
Victim age (peer/adult)	−0.27	1.15	0.06	1	.811	0.76	(.79, 7.28)
Adjusted <i>R</i> <sup>2</sup>	.63						
Correctly classified	87.7% (Total)						90% (Sex-plus) 84.8% (Sex-only)
Victim approach (impulsive)	0.97	0.78	1.54	1	.215	2.63	(.57, 12.18)
Deviant sexual fantasies	−1.11	0.87	1.63	1	.202	0.33	(.06, 1.81)
Victim age (peer/adult)	0.53	0.66	2.42	1	.120	2.81	(.76, 10.35)
Sexual recidivism	−1.05	0.84	0.40	1	.527	1.70	(.33, 8.75)
Adjusted <i>R</i> <sup>2</sup>	.22						
Correctly classified	71.2% (Total)						80% (Sex-plus) 60.6% (Sex-only)

Dependent variable: ASO (sex-plus = 1, sex-only = 0). Independent variables: antisocial behavior with peers, school absenteeism, substance consumption, disruptive behavior at school, violent behavior at school, deviant sexual fantasies (1 = yes; 0 = no), and victim age (1 = peer/adult; 0 = child)

*OR* odds ratio, *CI* confidence interval (lower, upper)

of sex-only offenders). Major variables related to sex-plus offenders were the presence of antisocial behavior with peers and school absenteeism.

The second analysis was focused on sexual development related variables and on the characteristics related to the committed sexual crimes. The final model showed significant differences ( $\chi^2 = 13.18$ ;  $p = .010$ ; Cox and Snell  $R^2 = .16$ ; Nagelkerke  $R^2 = .22$ ), and the Hosmer and Lemeshow test indicating a  $\chi^2 = 2.41$  and  $p = .660$ . This model correctly classified 71.2% of the cases (80% of sex-plus and 60.6% of sex-only ASO). None of the variables included showed statistically significant results related to sex-plus group.

## Discussion

This research was conducted to examine the presence of differential characteristics and risk factors between sex-only and sex-plus offenders in a Spanish sample of ASO. This classification criterion was established because previous literature has evidenced its validity (Butler & Seto, 2002; Cale et al., 2016; Zeng et al., 2015). Additionally, due to the limited findings related to the sexual development among ASO in previous research (Fox & DeLisi, 2018), a special focus has been placed on it.

The fact that no significant differences exist between groups among their family background characteristics, and given the elevated presence of these variables, support the

idea that family risk factors could be relevant for the vast majority of ASO (Fox et al., 2015; Lightfoot & Evans, 2000; Rosa et al., 2020; Siria et al., 2020). Contrary to previous research (Carpentier et al., 2011; Pullman et al., 2014), sex-plus ASO in this sample did not report significantly higher rates of physical victimization during childhood than sex-only ASO. The existence of a significantly higher rates of Child Welfare System involvement among sex-plus might be related to a more severe family dysfunction or to further childhood adverse experiences (Lussier et al., 2019). These situations might be derived from additional factors that were not evaluated in this study, and that might be associated to an increased risk of antisocial behavior in this sample, but additional research is needed.

Findings related to school context evidenced a more problematic, disruptive, and aggressive behavior among sex-plus offenders. Conversely, sex-only offenders were more likely to be bullied. These results are similar to Butler and Seto (2002) and Carpentier et al. (2011) findings, who found more conduct and educational problems with sex-plus offenders during childhood. The importance of focusing detection efforts in the academic environment arises with these results. Personal, emotional, and family distress during adolescence might be disclosed at school and affect academic outcomes and behavior. Poor academic results and learning difficulties are usually related to general delinquency (Moffitt, 1993; Seto & Lalumiere, 2010). In this regard, it should be noted that these difficulties might be the consequences of the above-mentioned adverse circumstances.

Similar to preceding research, current findings support that sex-plus have significantly higher levels of substance consumption (Butler & Seto, 2002; Pullman et al., 2014), which could also be associated to their aggravated dysfunctional behavior. Although previous studies found significantly higher proportion of psychiatric diagnoses among sex-plus offenders (Pullman et al., 2014), others did not find differences between groups (Chu & Thomas, 2010), which is in line with current results. This is consistent with the idea that ASO are not usually diagnosed with a mental disorder, and that there is not a causal link between psychopathology and sexual violence (Freeman et al., 2005; Simon, 2000; Van Wijk et al., 2007). Even so, attention to the sample source should be paid because the use of institutionalized participants might lead to an overrepresentation of mental disorder diagnoses (Seto & Lalumiere, 2010).

Regarding sexual development, it must be highlighted that the majority of ASO in both groups had previous partner relationships and previous consensual sexual intercourses before committing the sexual crime. Since no significant differences were found between groups, current results do not support that sex-only offenders have lower rates of previous partner relationships or sexual intercourse as Pullman et al. (2014) stated. In this sense, sex-only ASO should not be considered as sexually inexperienced (Van Wijk et al., 2007). It was difficult to find studies assessing whether ASO had a partner relationship when they committed the sexual offense. In this regard, current results showed that sex-plus ASO had significantly higher percentages of having a partner at that time than sex-only offenders. An important consideration in this study is the fact that none of the participants committed the adjudicated sexual offenses against their partners.

The only variable related to sexual development that significantly differed between groups was the presence of deviant sexual fantasies, which was higher among sex-only group. Pullman et al. (2014) found no significant differences between groups in this domain. Taking into consideration that this variable was categorized when violence or younger children were present in their sexual fantasies, and considering that sex-only offenders usually have child victims, it should be further analyzed if the presence of deviant sexual fantasies precedes the sexual crime, or if the commission of a sexual offense towards a child leads to the development of such fantasies. Nevertheless, having deviant sexual fantasies does not mean that these fantasies are linked to the perpetration of a sexual offense. Caution should be paid when interpreting the results because it was not possible in this research to identify the mechanisms of its interaction. Additionally, due to the age of the ASO, it cannot be assumed the existence of stable deviant sexual interests that will persist over adulthood (Barbaree & Marshall, 2008).

It must be highlighted that consistent with previous research, rates of sexual victimization during childhood showed no significant differences between groups (Chu & Thomas, 2010; Pullman et al., 2014). Although it has been asserted the impact of being sexually victimized in future sexual offending (Johnson & Knight, 2000), some researchers recommend that the effects of childhood sexual victimization should be evaluated along with other traumatic experiences (Fox et al., 2015), such as the sexuality in the family (Levesque et al., 2012). Given that many participants presented with one or more risk factors related to sexual development, it seems relevant to continue assessing which of those experiences might have affected their sexualization process and how that experiences, in conjunction with other risk factors, have led to the commission of a sexual abusive behavior, as specialist explanation argues (Kjellgren et al., 2010; Lightfoot & Evans, 2000; Pullman & Seto, 2012; Rajlic & Gretton, 2010).

Regarding to sexual recidivism, inconsistent findings have been shown in previous research. While some studies have identified higher rates of sexual reoffending among sex-plus (Van Wijk et al., 2007), others have demonstrated no significant differences between groups (Aebi et al., 2012; Chu & Thomas, 2010; Rajlic & Gretton, 2010). Current findings support that sex-only tend to sexually reoffend more often than sex-plus ASO. Nevertheless, sexual recidivism percentage is higher than in previous research (Caldwell, 2016). This might be due to fact that researchers usually measure recidivism using official criminal records, which could have underreported additional offenses, while in this study, sexual reoffending has been interpreted as the repetition of the sexually coercive behavior through official records and through professionals' information and participants' self-report (Siria et al., 2021). Moreover, since sex-plus are more visible to the authorities due to their more severe and general antisocial behavior, their overall offenses could have been reported to a greater extent. When comparisons between groups regarding sexual offense characteristics were made, sex-only had significantly more child victims (Butler & Seto, 2002; Pullman et al., 2014; Rajlic & Gretton, 2010), as well as more planned sexual offenses. These three domains could be interrelated as the facility of offending towards a child victim could be linked to the repetition of this conduct and, consequently, to the planning of subsequent offenses.

Logistic regression analyses indicated that sex-plus offenders were more likely to exhibit school absenteeism and antisocial conduct with their group of peers. Compared to sex-only offenders, sex-plus had more than 10 times the odds of school absenteeism, and more than 10 times the odds of the presence of antisocial conduct with their group of friends. This emphasizes that sex-plus ASO have higher levels of antisocial attitudes and a more problematic background as previous research has evidenced (Butler & Seto,



2002; Pullman et al., 2014; Zeng et al., 2015). However, when variables related to sexual development and sexual crime characteristics were included for the analysis, none of them showed statistically significant results.

### Limitations of the Study

Some limitations of the present study must be highlighted. First, the limited size of the sample has to be taken into account when interpreting the results. Second, it was not possible to compare ASO with a control group of nonsexual offenders so, specific risk factors exclusively related to sexual violence could not be identified. A third limitation is that ASO of the sample were serving a sentence due to the severity of the committed sexual offense. Thus, results may not be generalizable to all the adolescents who have engaged in sexually abusive behaviors. Although multiple sources were used to collect data, another limitation is that the use of a cross-sectional design may have biased or underreported important information, specifically the data related to sexual development. Finally, although the placement of the participants, either in an institution or in the community, would be an interesting variable to control for among subgroups, the sample size did not allow to perform these analyses. Therefore, this issue should be considered in future studies with larger samples.

### Conclusions

This is the first research using this classification criterion in a Spanish sample of ASO, and the results extend the utility of this classification. The results strongly support that family-related adverse experiences during infancy, and sexual development-related variables, are crucial to evaluate ASO and to improve the etiological understanding, assessment, and treatment of sexually coercive youth (Kjellgren et al., 2010).

Those experiences related to sexual development during childhood such as sexualized family environment, early pornography consumption, sexual victimization, or early sexual intercourse should be further analyzed among ASO to determine its implication in the development of sexually abusive behaviors and, consequently, to help clinicians to better target their interventions (Goulet & Tardif, 2018). These interventions should not be exclusively focused on ASO themselves, but should involve other members of the family in which those experiences took place in order to raise family awareness, identify the role and liability of each member, and provide them with skill tools to manage the situation (Yoder et al., 2016). In this sense, the concept of childhood direct sexual abuse should be broadened beyond a wider array of sexual inadequate experiences.

Adolescent sexual delinquency seems to have a common framework, but the diversity of criminal conduct and the different onset pathways should be assessed to provide an adequate intervention in order to reduce recidivism and reintegrate them. It has been shown that sex-plus offenders have a more dysfunctional background that affects them in several life aspects, which is reflected on a larger antisocial conduct. From this point of view, tailored treatment programs should exist for different types of ASO, as sex-only and sex-plus have different criminogenic needs. These treatments should include family interventions, the identification of experiences that had an impact on the adolescents' sexual development, address sexual and emotional education, and a positive construction of interpersonal relationships.

This research has also implications for Child Welfare System interventions because early detection through those services could prevent future adolescent delinquency and, more precisely, prevent sexually coercive behavior. Providing these professionals with an adequate training in terms of adolescent sexual violence could lead them to effectively assess family environments in which any type of child maltreatment or inadequate exposure to sexual practices is taking place. Consequently, primary prevention policies could also be developed taking into consideration these findings.

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**Author Contribution** All authors have made substantial contributions to the work and have approved the final manuscript.

**Availability of Data and Material** The data supporting this study are not available.

### Declarations

**Ethics Approval** Ethical approval was obtained separately through the Juvenile Justice System authorities that gave the permission to develop the study.

**Informed Consent** Informed consent was obtained from participants over 18 years old, and from participants' parents or legal guardians when they were under the age of 18.

**Conflict of Interest** The authors declare no competing interests.

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