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Psychosocial and Personality Characteristics of Juvenile Offenders in a Detention Centre regarding Recidivism Risk

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ABSTRACT

This study analyses the psychosocial characteristics based on recidivism risk of juvenile offenders in conditions of internment. A sample of 102 juvenile offenders (92 male, 10 female) who were serving sentences in the only detention centre in Navarra (Spain) was used. Data on sociodemographic and psychosocial characteristics as well as features related to recidivism risk were collected through the Youth Level of Service/Case Management Inventory (YLS/CMI) and data on personality characteristics were obtained through the Millon Adolescent Clinical Inventory (MACI). The results showed that risk of reoffending was high for 21.6% of the sample, moderate for 31.4%, and low for 47.1%. Statistically significant differences were found between groups for various psychosocial and personality characteristics. In addition, the main variables related to the different risk levels of criminal recidivism were the presence/absence of history of violent behaviour, school performance, problem-solving skills, and submission as a personality trait. These four variables correctly classified 80.4% of the sample. According to the results, these variables must be considered in the development of effective intervention programmes in detention centres with juvenile offenders in order to decrease criminal reoffending rates.

Características psicosociales y de personalidad de menores infractores en un centro de internamiento en función del riesgo de reincidencia

RESUMEN

En este estudio se analizan las características psicosociales de una muestra de menores infractores en un centro de internamiento en función del riesgo de reincidencia. Se evaluó una muestra de 102 menores infractores (92 varones y 10 mujeres) que cumplían una medida judicial en el único centro de internamiento de Navarra (España). Se recogió información sobre las características sociodemográficas, psicosociales y el riesgo de reincidencia a través del Inventario para la Gestión y la Intervención con Jóvenes (IGI-J), así como sobre las características de personalidad a través del Inventario Clínico de Adolescentes de Millon (MACI). Los resultados mostraron que el riesgo de reincidencia era alto para el 21.6% de la muestra, moderado para el 31.4% y bajo para el 47.1%. Se encontraron diferencias estadísticamente significativas entre los grupos en numerosas características psicosociales y de personalidad. Además, las principales variables relacionadas con los diferentes niveles de riesgo de reincidencia fueron la presencia/ausencia de una historia de conductas violentas, el rendimiento escolar, las habilidades para la solución de problemas y la sumisión como características de personalidad. Estas cuatro variables clasificaban correctamente al 80.4% de la muestra. Con arreglo a los resultados encontrados, estas variables se deben tener en cuenta en el desarrollo de programas de intervención eficaces en los centros de internamiento con menores infractores con el objetivo de disminuir la tasa de reincidencia.

Juvenile delinquency is a serious social problem (World Health Organization, 2016). The under-age offence rate is very high: 80% of adolescents have committed at least one criminal act in their lives. However, generally, these are considered not severe. Different factors have been associated with criminal behaviour, both personal factors, such as impulsivity, and factors related to school, family, or peers (Leverso et al., 2015). Specifically, juvenile offenders primarily present socialization issues, emotional-intelligence deficits, and inadequate coping strategies (Navarro-Pérez et al., 2020).

One common feature of criminal recidivism in adolescents is that their offences are progressively more severe and frequent. Various studies have found that the risk of reoffending increases as do susceptibility to peer-pressure, gang membership (Leverso et al., 2015), lack of autonomy when solving problems, impulsivity when

managing difficulties (Navarro-Pérez & Pastor-Seller, 2017), and toxic substance abuse (Graña et al., 2007). Regarding the profile of young offenders, youths with a high risk of reoffending have been found to have higher rates of school failure and behavioural disorders as well as poor psychological adjustment and social skills compared to offenders with low risk of recurrence (Basanta et al., 2018). Other factors that predict criminal recidivism and, more specifically, such recidivism that is accompanied by violence, are family factors (family violence, criminal behaviour, drug abuse, employment and/ or economic difficulties), as well as lack of adherence to intervention programmes and lack of adequate coping strategies (Bravo et al., 2009; Capdevila et al., 2005; Mulder et al., 2011; San Juan et al., 2007). These factors must be considered when implementing intervention programmes, focusing available resources on high-risk offenders (Clarke et al., 2017).

The Spanish juvenile justice system establishes that juvenile offenders are those who have committed an offense between 14 and 18 years of age. The Minor's Penal Responsibility Act (Organic Law 5/2000) indicates which measures can be imposed by the juvenile judge based on the best interests of minors. Technical teams formed by non-legal professionals, that include educators, social workers, and psychologists, recommend the type of measure imposed (Cuervo et al., 2020). Therapeutic measures include outpatient treatment or internment under a therapeutic regime (Alcázar-Córcoles et al., 2019). Internment in detention centres is a measure used in dangerous situations, primarily when the committed offence is serious in nature and characterized by violence, intimidation, or endangering others. The objective of internment centres is to punish offenders for the performed act and, fundamentally, to facilitate the educational interventions required for the social reintegration of the youth.

In Spain, the criminal recidivism rate is 62%-70% (Capdevila et al., 2005; San Juan et al., 2007) in those who have served judicial sentences in internment. This rate is much higher than the rate of those who fulfil their judicial penal obligations in open environments, which is 22%-27% (Bravo et al., 2009; Capdevila et al., 2005; San Juan et al., 2007). To interpret these data, it is necessary to consider that only those whose acts are the most serious and the most chronic are referred to a detention measure.

The Risk-Need-Responsivity (RNR) model, developed by Bonta and Andrews (2017), is the prevailing model for explaining criminal behaviour in young offenders. RNR identifies youths that require intervention (risk), the criminogenic needs that they present (needs), and the strategies that should be used to maximize youth's ability to benefit from intervention (responsivity) (Childs et al., 2014). This model takes into account risk factors of two types, static and dynamic and/or cultural. Dynamic factors are modifiable conditions/behaviours that must be included in assessment tools and interventions with young offenders (Clarke et al., 2017). According to the RNR model, therefore, youth who present a greater risk of recidivism should receive a greater number of resources in order to reduce their probability of reoffending, while those with a lower risk of recidivism should not be beneficiaries of large interventions (Andrews et al., 2006; Bouchard & Wong, 2017).

From RNR model's perspective, intervention failure or success is determined by programme's adequacy. In this way, high-risk young offenders will benefit the most from implemented interventions (Lipsey, 2009; Luong & Wormith, 2011). Therefore, a thorough evaluation of factors predicting criminal recidivism and the specific profile of juvenile offenders who are in detention centres and/or have contact with social services from an early age is needed (Augimeri et al., 2012). Recent studies have found that juvenile offenders who experience formal contact with the criminal justice system also exhibit high reoffending rates (Brame et al., 2018). Knowing the specific characteristics of juvenile offenders with high recidivism risk will allow us to implement individually tailored strategies in order to lower criminal reoffending rates.

For all these reasons, the first objective of this study was to describe juvenile offenders who serve judicial penalties in the only detention centre in Navarra (Spain), depending on their level of recidivism risk. The second objective was to identify main psychosocial characteristics and personality variables that relate to different risk levels of recidivism. The primary hypothesis of this study is that minor offenders with a higher risk level of recidivism will present a more serious psychosocial profile. In summary, this study is about determining the specific problems presented by young offenders taking into account the different risk of recidivism.

Method

Participants

The initial sample consisted of 224 adolescents who had participated in the Juvenile Detention Programme of the Ilundain-Haritz Berri Foundation in Navarra (Spain) from 2000 to 2014. The sample represents all the adolescents who were involved in this programme during said period.

The inclusion criteria for the study were: (a) having committed an offence established in the Spanish Penal Code; (b) having been sent by the Juvenile Court to the detention centre to comply with an internment measure involving freedom deprivation in any form (i.e., closed, semi-open, open, or weekend internment); (c) being older than 14 years of age and younger than 18 at the time of committing the offence or crime; and (d) having completed the assessment instruments used in the study.

In accordance with these criteria, 122 subjects were excluded from the study because their files did not include all the required evaluation data. No differences in any of the available variables were found between those who were included and those who were not. Therefore, the final sample consisted of 102 juvenile offenders.

The average age of participants was 16.9 years (SD = 1.2). They were mostly male (n = 92, 90.2%) and born in Spain (n = 68, 66.7%). Although most of them (n = 87, 85.3%) were in school when the first disposition, 14.7% (n = 15) were not schooled. Main types of offences committed were crime against property (n = 44, 43.1%), aggressions/bodily harm (n = 17, 16.7%), sexual aggression (n = 6, 5.9%), crime against public health (n = 4, 3.9%), breach of sentence (n = 2, 2%), homicide/murder (n = 1, 1%), and others (n = 28; 27.4%).

Instruments

Records of adolescents by the Ilundain-Haritz Berri Foundation. This record is part of the foundation's evaluation protocol. It contains all relevant data on sociodemographic, psychosocial, criminological, and judicial characteristics of minors as well as their progression during the intervention programme.

Youth Level of Service/Case Management Inventory (YLS/CMI; Hoge et al., 2002; Spanish version by Garrido et al., 2006). This semi-structured inventory is based on the Risk-Need-Responsivity (RNR) model, developed by Bonta and Andrews (2017). It assesses the risk and protective factors associated with the development of criminal behaviour in youth aged 12 to 17 years. It also examines recidivism risk, performing a quantitative assessment of most significant risk factors for adolescents subjected to intervention, and determines the degree of educational supervision these adolescents require. The YLS/CMI has seven sections. The first two sections were used in this study to assess risk factors for criminal recidivism. The 42 items of these two sections are grouped into eight areas: 1) prior and current offences and dispositions, 2) family circumstances and parenting, 3) education and employment, 4) peer relations, 5) substance use, 6) leisure and recreation, 7) personality and behaviour, and 8) attitudes and orientation. This assessment facilitates obtaining an estimate of

Table 1. Risk Factors for Criminal Recidivism in the Adolescents in the Sample

Risk areas (YLS/CMI)	Risk level (*N* = 102)					
	Low		Moderate		High	
	n	(%)	*n*	(%)	*n*	(%)
Prior and current offences and dispositions	0	-	87	85.3	15	14.7%
Family circumstances and parenting	63	61.8%	19	18.6%	20	19.6%
Education and employment	34	33.3%	30	29.4%	38	37.3%
Peer relations	74	72.5%	13	12.7%	15	14.7%
Substance use	55	53.9%	31	30.9%	16	15.7%
Leisure and recreation	51	50.0%	5	4.9%	46	45.1%
Personality and behaviour	46	45.1%	52	51.0%	4	3.9%
Attitudes and orientation	68	66.7%	33	32.4%	1	1.0%
Overall risk level	48	47.1%	32	31.4%	22	21.6%

Note. YLS/CMI = Youth Level of Service/Case Management Inventory.

the criminal recidivism risk of young offenders and classifies them into four risk groups: low (0 to 8 points), moderate (9 to 21 points), high (22 to 32 points), and very high (33 to 42 points). The third section assesses other psychosocial factors, special considerations, and needs that must be considered in minors' case plan. This third part does not affect minors' recidivism risk score, but it contemplates variables that can impact the way a minor responds to intervention. The YLS/CMI has shown high accuracy in predicting recidivism in young offenders (Ortega et al., 2020).

Millon Adolescent Clinical Inventory (MACI; Millon, 1993; Spanish version by Millon, 2004). This self-report instrument includes 160 items grouped in 31 scales. It was specifically designed to assess adolescent personality features and clinical syndromes. The items have a dichotomous response format (true or false). Twelve scales assess personality prototypes, eight assess the expressed concerns, seven assess clinical syndromes, and four assess reliability and social desirability. Scores with a base rate higher than 75 are considered clinically significant. Cronbach's alpha for the Spanish version is .82 (Castañeda et al., 2012).

Design

A retrospective ex post facto design based on the collection of file data was used.

Procedure

The protocol for this study was approved by the Ethics Committee of the Universidad Pública de Navarra (code: PI-015/15). This study was authorized by the Ilundain-Haritz Berri Foundation, which is in charge of the Detention Programme of the Juvenile Justice System.

Data collection was performed at the Ilundain-Haritz Berri Foundation by the research team. The YLS/CMI was completed for each juvenile offender by the research team, considering adolescents' records and reports from the Foundation's technical team. The MACI was applied by psychologists of the detention programme during adolescents' first week at the centre.

After assessing the first two parts of the YLS/CMI, the sample was divided into three groups depending on the risk of criminal recidivism: low, moderate, and high. None of the studied adolescents achieved a score higher than 32. Thus, no one was included in the very-high-risk group. This step was followed by a comparison of all the variables studied among the three groups.

Data Analysis

Statistical analyses were performed with the SPSS programme (version 23.0 for Windows). A descriptive analysis (percentages,

means, and standard deviations) was performed to determine sample characteristics. Comparison among groups was performed through χ^2 test for categorical variables, and ANOVA was used for quantitative variables. In all cases, differences with *p* values < .05 were considered significant. Effect sizes were provided in all comparison: η^2 value in quantitative variables and φ value in qualitative variables. A forward stepwise multinomial logistic regression was used to identify the variables associated with recidivism risk. The risk group was used as a dependent variable (adopting high-risk group as reference) and psychosocial variables, special considerations, and needs showing significant differences among groups as independent variables. In addition, personality variables with statistically significant differences were entered as covariates.

Results

Risk of Criminal Recidivism

Table 1 presents the level of risk of criminal recidivism of young offenders in the sample based on their scores in the different areas evaluated by the YLS/CMI. A total of 22 minors (21.6% of the sample) presented high risk, 32 (31.4%) moderate risk, and 48 (47.1%) low risk. No subject had a score corresponding to the very high category in recidivism risk. The areas with a higher percentage of youths with high risk of criminal recidivism were leisure and recreation (45.1%), education and employment (37.3%), and family circumstances and parenting (19.6%).

Psychosocial Characteristics of Adolescents

Regarding the psychosocial profile, studied adolescents were predominantly male and born in Spain (Table 2). However, a third of the sample were immigrants. The most prevalent characteristics were low school performance, previous history of assault and violence, lack of social and problem-solving skills, previous history of receiving assistance from social services, school dropout, economic difficulties, and ethnic or cultural problems.

Comparison among the three studied groups revealed statistically significant differences for most of the studied variables. Generally, high and moderate risk groups had a higher prevalence of problematic psychosocial features. The high-risk group differed from the moderate and low risk groups in physical and/or mental health problems variables. Family history of alcohol and drug abuse and belonging to a group of peers outside one's age group also made a difference. In addition, significant differences were found between the high-risk group and the low-risk group in self-esteem, school dropout, and suicide attempts. Finally, the three groups differed significantly from one another in social and problem-solving skills.

Table 2. Comparison among Adolescents with Low, Moderate and High Risk using Psychosocial and Sociodemographic Variables

Variables	Total $N = 102$	Low risk (a) $n = 48$	Medium risk (b) $n = 32$	High risk (c) $n = 22$				LSD post hoc		
	$M\,(SD)$	$M\,(SD)$	$M\,(SD)$	$M\,(SD)$	η^2	F	p	a-b	a-c	b-c
Age	16.9 (1.2)	17.0 (1.3)	16.8 (1.1)	17.0 (1.1)	.004	0.27	.760	-	-	-
Number of siblings	3.0 (1.3)	3.1 (1.3)	2.9 (1.4)	3.0 (1.1)	.007	0.31	.737	-	-	-
	$N\,(\%)$	$n\,(\%)$	$n\,(\%)$	$n\,(\%)$	Phi	χ^2	p	Z test post hoc		
Sex										
Male	92 (90.2)	44 (91.7)	28 (87.5)	20 (90.9)	.062	0.4	.822	-	-	-
Female	10 (9.8)	4 (8.3)	4 (12.5)	2 (9.1)						
Place of origin										
Spain	68 (66.7)	35 (72.9)	22 (68.8)	11 (50.0)						
Latin America	27 (26.5)	12 (25.0)	7 (21.9)	8 (36.4)	.264	7.1	.313	-	-	-
Europe	3 (2.9)	0 (-)	2 (6.3)	1 (4.5)						
Africa	4 (3.9)	1 (2.1)	1 (3.1)	2 (89.1)						
Last year in school during the first disposition	$N = 68$	$n = 25$	$n = 28$	$n = 15$						
Primary	1 (1.5)	0 (-)	0 (-)	1 (1.5)						
Middle school	56 (82.4)	20 (80.0)	26 (92.9)	10 (66.7)	.357	8.7	.193	-	-	-
Secondary	1 (1.5)	1 (4.0)	0 (-)	0 (-)						
No schooling	10 (14.7)	4 (16.0)	2 (7.1)	4 (26.7)						
Psychosocial/special considerations/needs										
History of habitual crime in the family	8 (7.8)	1 (2.1)	4 (12.5)	3 (13.6)	.203	4.2	.123	-	-	-
Family psychiatric and emotional problems	9 (8.8)	1 (2.1)	4 (12.4)	4 (18.2)	.235	5.6	.060	-	-	-
Threatened by others	3 (2.9)	0 (-)	1 (3.1)	2 (9.1)	.207	4.4	.112	-	-	-
Conflict between parents	22 (21.6)	2 (4.2)	8 (25.0)	12 (54.5)	.474	22.9	< .001	a<b	a<c	b=c
Housing/financial problems	26 (25.5)	2 (4.2)	11 (34.4)	13 (59.1)	.504	25.9	< .001	a<b	a<c	b=c
Unsupportive parents	13 (12.7)	0 (-)	5 (15.6)	8 (36.4)	.423	18.3	< .001	a<b	a<c	b=c
Ethnic/cultural difficulties	25 (24.5)	3 (6.3)	9 (28.1)	13 (59.1)	.476	23.1	< .001	a<b	a<c	b=c
Victim of battering/physical or sexual abuse	17 (16.7)	2 (4.2)	6 (18.8)	9 (40.9)	.274	14.8	.001	a<b	a<c	b=c
School performance below chronological age	50 (49.0)	4 (8.3)	25 (78.1)	21 (95.5)	.777	61.6	< .001	a<b	a<c	b=c
Racist/sexist attitudes	13 (12.7)	1 (2.1)	6 (18.8)	6 (27.3)	.315	10.1	.006	a<b	a<c	b=c
Does not take responsibility for his/her actions	16 (15.7)	0 (-)	12 (37.5)	4 (18.2)	.449	20.5	< .001	a<b	a<c	b=c
History of using weapons	8 (7.8)	0 (-)	4 (12.5)	4 (18.2)	.285	8.3	.016	a<b	a<c	b=c
History of assaults and violent acts	41 (40.2)	3 (6.3)	21 (65.6)	17 (77.3)	.658	44.2	< .001	a<b	a<c	b=c
Has been under guardianship/care of social services	30 (29.4)	5 (10.4)	14 (43.8)	11 (50.0)	.396	16.0	< .001	a<b	a<c	b=c
Physical/mental health problems	13 (12.7)	2 (4.2)	3 (9.4)	8 (36.4)	.378	14.5	.001	a=b	a<c	b<c
Family history of alcohol and drug abuse	8 (7.8)	1 (2.1)	0 (-)	7 (31.8)	.469	22.4	< .001	a=b	a<c	b<c
Peers outside of age group	12 (11.8)	1 (2.1)	3 (9.4)	8 (36.4)	.412	17.3	< .001	a=b	a<c	b<c
Low self-esteem	15 (14.7)	2 (4.2)	6 (18.8)	7 (31.8)	.310	9.8	.007	a=b	a<c	b=c
School drop-out	28 (27.5)	8 (16.7)	9 (28.1)	11 (50.0)	.287	8.4	.015	a=b	a<c	b=c
Suicide attempts	3 (2.9)	0 (-)	0 (-)	3 (13.6)	.332	11.2	.004	a=b	a<c	b=c
Poor social/problem-solving skills	41 (40.2)	2 (4.2)	19 (59.4)	20 (90.9)	.730	54.3	< .001	a<b	a<c	b<c

Personality Characteristics

In Table 3, the results obtained in the different MACI scales and the comparison of the three studied groups are presented.

Regarding personality prototypes, the unruly, dramatizing, egotistic, and forceful scales got the highest scores. The primary concern expressed by adolescents was social insensitivity. In the case of clinical syndromes, scores for delinquent predisposition, substance abuse proneness, and impulsive propensity scales stood out.

Also regarding personality prototypes, significant differences were found only in the submissive category, in which high-risk adolescents scored lower than those with low or moderate risk. In relation to expressed concerns, significant differences were observed in two scales: body disapproval, with moderate- and high-risk groups scoring higher than the low-risk group, and social insensitivity, with higher scores for the high-risk group in relation to the other two groups.

Regarding clinical syndromes, significant differences were observed in four scales: eating dysfunctions, with a higher score in moderate- and high-risk groups, and substance abuse proneness, delinquent predisposition, and anxious feelings, with higher scores in the high-risk group.

Variables Related to Criminal Recidivism

Results obtained in the final model of the multinomial logistic regression analysis performed to identify the variables related to criminal recidivism are shown in Table 4.

Results indicated that main variables related to the high-risk group regarding criminal recidivism compared with the low-risk group were history of violent behaviour, school performance below chronological age, and lack of problem-solving skills. In addition, low scores in the submissive category were related to the high-risk group compared with the moderate-risk group. These four variables correctly classified 80.4% of cases.

Discussion

In this study, an analysis of the risk of criminal recidivism in a representative sample of juvenile offenders serving court-ordered detention sentences in Spain was performed. In addition, characteristics of these adolescents in terms of risk level were studied. The aim was to understand variables related to the increased

Table 3. Comparison among Adolescents in the Scales of the MACI based on Risk Assessed through the YLS/CMI

Variables	Total (N = 102) M (SD)	Low risk (a) (n = 48) M (SD)	Medium risk (b) (n = 32) M (SD)	High risk (c) (n = 22) M (SD)	η²	F	p	a-b	a-c	b-c
Personality scales										
Introversive	37.7 (19.6)	36.5 (18.6)	37.1 (21.0)	41.2 (20.2)	.009	0.441	.645	.908	.364	.453
Inhibited	34.9 (21.6)	34.9 (19.7)	36.7 (24.2)	32.2 (22.4)	.005	0.273	.762	.726	.630	.462
Doleful	45.3 (18.0)	43.7 (17.8)	45.7 (19.6)	48.1 (16.6)	.009	0.457	.634	.630	.348	.633
Submissive	40.8 (28.2)	42.3 (26.0)	48.5 (32.7)	26.5 (20.7)	.080	4.330	.016	.328	.027	.005
Dramatizing	69.3 (27.9)	71.3 (24.8)	68.3 (31.1)	66.4 (30.2)	.005	0.264	.769	.635	.497	.810
Egotistic	68.2 (29.9)	71.3 (26.8)	62.6 (33.8)	69.5 (30.4)	.017	0.835	.437	.206	.815	.409
Unruly	75.0 (26.9)	72.7 (26.4)	70.5 (29.3)	86.4 (21.9)	.052	2.690	.073	.718	.047	.032
Forceful	62.8 (24.8)	60.4 (25.6)	62.2 (25.6)	69.1 (21.3)	.019	0.941	.394	.759	.177	.315
Conforming	50.4 (32.4)	54.5 (34.8)	49.0 (31.5)	43.8 (28.0)	.017	0.857	.428	.463	.206	.566
Oppositional	57.3 (24.9)	53.1 (25.4)	57.7 (25.5)	65.8 (21.2)	.039	2.025	.137	.418	.047	.234
Self-demeaning	43.2 (18.3)	41.1 (18.9)	44.9 (17.2)	45.3 (18.9)	.012	0.581	.561	.369	.386	.948
Borderline tendency	50.9 (19.9)	48.3 (21.2)	52.7 (18.1)	53.9 (19.6)	.016	0.794	.455	.331	.278	.836
Expressed concerns										
Identity diffusion	48.7 (24.4)	44.2 (24.6)	52.2 (20.3)	53.5 (28.6)	.031	1.584	.210	.152	.141	.849
Self-devaluation	47.2 (23.5)	44.7 (23.5)	49.5 (23.7)	49.4 (23.7)	.010	0.518	.597	.375	.439	.991
Body disapproval	47.2 (22.5)	41.2 (18.9)	54.1 (23.4)	50.4 (25.6)	.068	3.638	.030	.011	.104	.547
Sexual discomfort	38.7 (24.6)	39.7 (25.9)	42.4 (24.4)	31.3 (21.2)	.028	1.407	.250	.621	.189	.105
Peer insecurity	44.8 (17.5)	41.4 (16.7)	45.6 (17.7)	50.8 (17.9)	.044	2.263	.109	.290	.038	.284
Social insensitivity	79.1 (27.9)	78.1 (22.6)	71.2 (35.0)	92.6 (27.7)	.077	4.126	.019	.270	.040	.005
Family discord	56.0 (22.7)	54.1 (23.1)	57.4 (21.9)	58.0 (23.9)	.006	0.319	.728	.523	.503	.924
Child abuse history	53.8 (23.5)	51.5 (23.9)	56.6 (25.7)	55.0 (19.2)	.010	0.481	.620	.346	.566	.808
Clinical scales										
Eating dysfunctions	47.4 (23.6)	39.9 (20.3)	55.9 (24.7)	51.4 (24.1)	.096	5.234	.007	.003	.051	.473
Substance abuse proneness	76.4 (28.3)	69.9 (30.2)	76.9 (26.6)	89.9 (22.1)	.074	3.980	.022	.269	.006	.091
Delinquent predisposition	79.0 (24.7)	76.7 (23.0)	73.7 (29.4)	91.9 (16.1)	.078	4.162	.018	.591	.016	.007
Impulsive propensity	68.7 (28.4)	65.8 (29.5)	65.4 (28.1)	79.8 (23.6)	.043	2.216	.114	.947	.055	.066
Anxious feelings	31.8 (24.6)	34.3 (23.0)	36.4 (27.5)	19.6 (19.3)	.070	3.750	.027	.701	.018	.012
Depressive affect	42.9 (25.3)	40.8 (22.6)	45.8 (27.8)	43.4 (27.3)	.008	0.377	.687	.391	.684	.741
Suicidal tendency	50.5 (23.5)	46.5 (24.6)	52.5 (20.1)	56.5 (24.5)	.030	1.546	.218	.264	.099	.537

Table 4. Multinomial Logistic Regression Analysis

Variables	B	p	Odds ratio	95% Confidence interval
		Reference category = High risk group		
Low-risk group				
Intersection	-27.200	.000		
History of violent behaviour (absence)	4.907	.000	135.267	11.4, 1596.6
School performance in chronological age	4.326	.008	75.660	3.0, 1872.1
Problem-solving skills	3.929	.006	50.879	3.1, 821.0
Moderate-risk group				
Intersection	-3.200	.006		
Submissive	0.039	.008	1.040	1.0, 1.0
Adjusted R²	0.789			
Correctly classified		80.4% (Global)	93.8% (Low risk)	75.0% (Medium risk) 59.1% (High risk)

likelihood of criminal recidivism because youth with increased risk appear to be those who most benefit from intervention programmes (Lipsey, 2009; Luong & Wormith, 2011). In this regard, it must not be forgotten that in addition to their punitive component, juvenile internment programmes must include educational interventions primarily aimed at socially reintegrating youth and preventing criminal recidivism. Therefore, understanding the specific characteristics of adolescents at higher risk is critical for developing effective intervention programmes tailored to their needs (De Swart et al., 2012).

The results found in this study reveal relatively low risk levels of criminal recidivism in the studied subjects. In particular, none of the adolescents presented a very high level of risk according to the classification provided by the YLS/CMI, and most participants had low to moderate risk of recidivism. These results contrast with actual rates of criminal recidivism found in other studies on minors in detention regimes, according to which two of three minors reoffend (Bravo et al., 2009; San Juan et al., 2007). Therefore, it is necessary for future studies to assess the extent to which risk levels detected in juvenile offenders relate to actual rates of reoffending, as well as possible differences related to the quality of social services in the different regions of Spain. The region of Navarra is well known for having a good socioeconomic development and providing high-standard social support (Rueda,

2012). This could explain the lack of minors with a very high level of risk in this study.

Regarding the characteristics of juvenile offenders in detention regimes, the majority of the sample consisted of males with a prior history of violent acts and lacking social and conflict-resolution skills. In addition, they had education-related problems, in both academic and family spheres, and previous contact with social services. It is necessary to consider that school and family make up the main socialization axes. Educational problems have been associated with an increased likelihood of developing violent behaviour and higher recidivism (Vaughn et al., 2014). Conversely, positive school experiences and family support are protective factors that help minimize criminal behaviour (Moffitt et al., 2011; Monahan et al., 2009; Whitaker et al., 2015). A remarkable outcome of this study is that one out of three offenders is of immigrant origin. This rate is significantly higher than the immigrant rate in Navarra during the studied period, which ranged from 6.4% in 2000 to 13.5% in 2014 (Instituto de Estadística de Navarra, 2017). This phenomenon may be related to the high presence of ethnic or cultural problems among the individuals included in the sample. Other studies have shown that immigrant uprooting plays a role in the development of various problems, including antisocial behaviour (Sobral et al., 2012).

Regarding personality characteristics, the youths primarily presented the following traits: they were unruly, dramatizing, egotistic, and forceful. They also exhibited a high degree of social insensitivity. In addition, a high predisposition to delinquency and substance abuse stood out. All these characteristics relate to a higher probability of committing criminal acts (Corrado et al., 2015; Mahler et al., 2017).

Additionally, in this study there were differences between studied adolescents as a function of their risk level of criminal recidivism. Thus, the primary hypothesis has been confirmed. Generally, different variables that may represent recidivism risk factors were found because they appear more frequently as the risk detected increases. In particular, adolescents with a higher risk of reoffending have more personal (physical and/or mental health problems, low self-esteem, poor social skills, difficulty solving problems, history of violent behaviour), social (family history of alcohol and/or other drug abuse, belonging to a group of peers outside one's age group), and school (dropout) problems than those who are at lower risk. These results agree with those of other studies (Arce et al., 2014; Basanta et al., 2018; Contreras & Cano, 2016). In addition, the only three cases with suicide attempts occurred in the group with the highest risk of reoffending. However, this fact must be interpreted cautiously because of the low number of cases that were encountered. Anyway they represent 13.6% of minors with high risk of recidivism in this sample. Therefore, intervention programmes should specifically assess this worrisome suicide risk.

The comparison of personality characteristics revealed that adolescents with increased risk of criminal recidivism are less submissive, have a more negative body image, and have lower social sensitivity. In addition, they present a greater inclination to substance abuse, greater predisposition to delinquency, anxious feelings, and eating disorders. These results are in line with those of other studies that also directly related this type of family, school, and social variables to the criminal recidivism of juvenile offenders in internment regimes (Bravo et al., 2009; Capdevila et al., 2005; San Juan et al., 2007).

However, in addition to risk factors found in the sample, protective factors that characterize the low-risk group must be considered (Navarro-Pérez et al., 2020). Intervention programmes with minors should have a dual approach, reducing risk factors and enhancing protective factors (Koehler et al., 2013; Lindblom et al., 2017), because incorporating both factors has been found to decrease the risk of reoffending (McGrath & Thompson, 2012; Peterson-Badali et al., 2015; Vincent et al., 2012). The results obtained in this study show that not having a history of previous violent behaviour, possessing

problem-solving skills, and adequate academic performance are the main variables associated with a lower risk of recidivism.

Therefore, intervention programmes should assess the presence of histories of previous violent behaviours and develop specific measures to train problem-solving skills and promote adequate academic performance. These aspects should be included in minors' case plans. In this study, the presence of previous violent behaviours is a static factor but, from a prevention perspective, specific interventions should consider the presence of early violent behaviours in minors in order to provide adequate strategies at the beginning of criminal career. Probably, problem-solving skills training may be an adequate way to develop future non-violent behaviours in these minors.

This study has several limitations. First, the sample is limited and only addresses a specific population and context: incarcerated juvenile offenders in Spain. The results should be generalized with caution to other contexts. Second, the study does not present differentiated results on the basis of relevant variables, such as sex, nationality, or the type of offence committed. A larger sample would facilitate more detailed analysis of these variables. Third, this is an ex post facto study. Results do not facilitate establishing causal relationships among the studied variables. Thus, longitudinal studies that analyse not only risk but also actual recidivism rates are necessary. Moreover the role of different variables (e.g., quality of social services) in the development of criminal recidivism should be studied. Future studies that ameliorate these shortcomings would help to establish effective prevention programmes aimed at strengthening protective factors and reducing risk factors in internment programmes for juvenile offenders.

In summary, data found support the need for specific educational interventions in juvenile detention centres aimed at providing them with appropriate skills to help them reintegrate socially and reduce the probability of recidivism in criminal acts. Understanding the specific characteristics of adolescents at higher risk is critical for developing these RNR-based interventions.

Conflict of Interest

The authors of this article declare no conflict of interest.

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