



ORIGINAL ARTICLE

Risk factors and profiles of reattempted suicide in children aged less than 12 years



César D. González^{a,b,*}, Carlos Fabian Martínez-Cárdenas^{b,c}

^a Línea de Ayuda en Salud Mental (Línea Amiga 106), Centro Regulador de Urgencias y Emergencias de Boyacá, Tunja-Boyacá, Colombia

^b Programa de posgrado en Neuropsicología y Educación, Fundación Universitaria Internacional de La Rioja, Bogotá, Colombia

^c Escuela de Enfermería, Universidad Pedagógica y Tecnológica de Colombia, UPTC, Tunja-Boyacá, Colombia

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KEYWORDS

Suicide;
Suicide attempt;
Reattempt;
Child behaviour;
Adverse childhood experiences

Abstract

Objective: Suicide attempt (SA) repetition is considered one of the main risk factors for completed suicide. In spite of this, there is no previous research on this variable in children. The objective was to determine the factors and profiles associated with reattempted suicide in children aged less than 12 years.

Methods: Cross-sectional study that included 120 reports (event code INS.356) of SA in children aged less than 12 years between 2018 and 2023 in the SIVIGILA surveillance system of Colombia. We carried out a bivariate logistic regression analysis to generate the best fitting risk factor model and a multiple correspondence analysis (MCA) to establish the possible SA recurrence profiles using the SPSS software, version 26.

Results: Of the 120 cases analysed, 43 (35.8%) were reports of reattempted suicide. The best model for predicting risk factors for repeated SA included child maltreatment (OR, 6.22; $P < .05$), persistent suicidal ideation (PSI) (OR, 30.91; $P < .001$), a history of violence or sexual abuse (OR, 13.10; $P < .05$) and the use of sharp objects (OR, 46.45; $P < .001$). The MCA identified 3 profiles: "first SA" with poisoning as the attempt method and in absence of PSI, violence and abuse; "one previous SA" with the use of sharp objects and presence of PSI; "two or more previous SAs" with a history of violence or sexual abuse, child maltreatment and hanging as the method. **Conclusion:** Our findings demonstrate the impact of early life adversity (ELA) on children's mental health, so it is necessary to detect and prevent these types of abuse in order to reduce childhood suicide.

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* Corresponding autor.

E-mail addresses: cesardpsy@gmail.com, cesar.gonzalez01@uptc.edu.co (C.D. González).

PALABRAS CLAVE

Suicidio;
Intento suicida;
Reincidencia;
Conducta infantil;
Experiencias adversas
en la infancia

Factores de riesgo y perfiles del reintento suicida en niños menores de 12 años**Resumen**

Objetivos: La reincidencia del intento suicida se considera uno de los principales factores de riesgo para el suicidio consumado. A pesar de esto, el estudio de esta variable en niños ha sido nulo. El objetivo fue determinar los factores y perfiles asociados con la reincidencia de intento suicida en niños menores de 12 años.

Métodos: Estudio transversal que incluyó 120 casos de intento suicida (código INS.356) de niños menores de 12 años ocurridos entre 2018 y 2023 tomados del reporte epidemiológico del sistema SIVIGILA de Colombia. Los datos fueron analizados por medio de un análisis de regresión logística bivalente para determinar el mejor modelo predictor de factores de riesgo, y se realizó un análisis de correspondencias múltiple para establecer los posibles perfiles de reincidencia usando el software SPSS (V.26).

Resultados: De los 120 casos analizados, 43 (35,8%) reportaron reincidencia de intento suicida. El mejor modelo predictor de factores de riesgo para el reintento suicida fue: maltrato infantil (OR = 6,22; $p < 0,05$), ideación suicida persistente (OR = 30,91; $p < 0,001$), historia de violencia o abuso sexual (OR = 13,10; $p < 0,05$) y el uso de elementos cortopunzantes (OR = 46,45; $p < 0,001$). El análisis de correspondencias múltiple identificó tres perfiles: "Primer intento suicida" con envenenamiento como método usado y sin la presencia de ideación suicida, violencia o abuso. "Un intento previo" que mostró el uso de elementos cortopunzantes e ideación suicida persistente. "Dos o más intentos previos" que incluyó historia de violencia o abuso sexual, maltrato infantil y ahorcamiento como método empleado.

Conclusiones: Los resultados reportados demuestran el impacto que la adversidad en la vida temprana tiene en la salud mental infantil, por lo que es necesario detectar y prevenir estos tipos de abuso como una forma de reducir la conducta suicida infantil.

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Introduction

Suicide is recognized as a public health problem, contributing to the annual loss of nearly 700 000 lives,¹ and is one of the leading causes of death in children and youth.² In recent years, rather than a decline, we have witnessed an alarming surge in suicide rates among the very young, and in particular in children aged less than 10 years.³ In Colombia, consistent with this global trend, the suicide rate increased from 0.05 deaths by suicide per 100 000 children aged 5–9 years in 2016 to 0.13 in 2019,⁴ while the suicide attempt (SA) rate increased from 0.33 attempts per 100 000 children in this age group in 2018 to 3.7 attempts in 2023.⁵

It is also important to take into account the past and future impact of the COVID-19 pandemic on the mental health of the young.⁶ This constitutes a new risk factor associated with suicidal behaviour in children and adolescents. Analysing the changes between pre- and post-pandemic periods can shed light on these repercussions.⁷

In spite of the above, the study of suicide in the young has historically prioritised adolescence, relegating its study in children to a phenomenon grouped with adolescent suicidal behaviour.⁸ Few studies have focused on suicidal behaviour in children aged less than 12 years as a specific phenomenon, highlighting the differences and particularities of suicidal behaviour in childhood that warrant further and deeper study of how to approach it.⁹

On the other hand, recurrent suicidal behaviour has traditionally been reported as one of the most important risk factors for completed suicide in youth,¹⁰ so children with a previous history of SAs constitute a particularly high-risk group requiring urgent detection, follow-up and treatment. In spite of this, research on the factors associated with recurrent suicidal behaviour has been scarce,¹¹ and we found no previous studies in the literature that identified the risk factors associated with SA repetition in children under 12 years of age.¹² Thus, the objective of our study was to determine the factors and profiles associated with repeated SA between 2018 and 2023 in children under 12 years of age in the department of Boyacá, Colombia.

Material and methods**Study design and instruments**

We conducted an exploratory cross-sectional study through the review of data on SA report records (Event code: INS.356) in the national public health surveillance system of Colombia (Sistema Nacional de Vigilancia en Salud Pública [SIVIGILA]).¹³ Suicide attempt is a notifiable event and is included in the protocols for important cases in public health in Colombia. The study included all SA reports in children aged less than 12 years of age between 2018 and 2023 for the department of Boyacá, Colombia. We excluded reports with

missing or poorly recorded information, which could interfere with the significance of the results, and cases classified as completed suicides.

Suicide attempt reports provide information on the year of the event, sociodemographic variables, history of previous SAs, triggers and risk factors, and the method or substance used in the SA.

Sample

Between 2018 and 2023, a total of 5530 filed reports in Boyacá had the INS.356 code, of which 125 corresponded to children aged less than 12 years. Five reports were excluded due to a lack of minimum trigger or risk factor information or because the information was ambiguous (eg use of all methods in the suicide attempt), so the analysis in the present study included a total of 120 SAs in children. Based on the INS.356 report records, none of the reported cases were classified as completed suicides.

Variables

The INS.356 report is completed by the health care provider that is the first contact in a case of suicide attempt, usually in the emergency department of a hospital or other health care facility. Through an interview with the patient and relatives, the provider establishes the presence or absence of triggers or risk factors. We determined whether a SA was a reattempt by identifying whether it was the first SA or there had been one or more previous attempts.

Reported variables:

- School-related problems: perceived stress in the school environment (eg bullying, harassment, school failure, etc.).
- Child maltreatment: Any form of physical, psychological, or sexual maltreatment experienced in the family environment.
- Family problems: perceived stress within the family environment (eg divorce of parents, conflicts, family dysfunction, etc).
- Family history of suicide: history of completed suicide in a family member.
- Persistent suicidal ideation (PSI): continuous thoughts about ending one's own life at the time of assessment in a health care facility.
- Suicide plan: existence of an organised plan involving a specific method before, during, or after attempting suicide.
- History of violence or sexual abuse: previous experience of physical or sexual violence in any environment.
- History of psychiatric disorder: previous diagnosis of a psychiatric disorder, preferably by a psychiatrist, before the suicide attempt. The INS.356 file has four diagnostic options: 1) depression; 2) personality disorder; 3) bipolar disorder; and 4) schizophrenic disorder.

Other reported variables that we coded based on the reviewed data were:

- Pandemic status: The data were grouped based on the dates when the COVID-19 pandemic began (2020 Mar 6) or ended (2022 Jun 30) in Colombia.¹⁴
- Socioeconomic status: In Colombia, socioeconomic status is stratified on a scale ranging from one to six. A score of less than three is considered low socioeconomic status, while a score of three or more is considered middle or high socioeconomic status.¹⁵

Statistical analysis

We calculated absolute frequencies and percentages. Repeated SA was set as the dependent variable, and we used the χ^2 test to analyse the association between variables. The statistical analysis was carried out with the software SPSS, version 26.0.

We performed a bivariate logistic regression analysis to determine the model with the highest predictive power of the risk factors associated with recurrent SA and a multiple correspondence analysis (MCA) to determine the profiles of recurrent SA during childhood. The variables included in each of these analyses included were those with a *P* value of less than 0.20 in the bivariate analysis stage. The variables included in the analysis were: 1) number of SAs, 2) persistent suicidal ideation (PSI), 3) history of violence or sexual abuse, 4) child maltreatment, 5) hanging, 6) sharp objects, and 7) poisoning.

We filed an official request for data retrieval with the SIVIGILA surveillance system of Boyacá, from which we received the anonymized SA reports corresponding to years 2018–2023, thus safeguarding the privacy of children with a history of SA and in adherence with the ethical regulations enshrined in Colombian legislation through Law 1273 of 2009 on data protection, Law 1266 of 2008 on Habeas Data, and Resolution 8430 of 1993 on health research.

Results

A total of 125 cases of SA were reported in children aged less than 12 years between 2018 and 2023. We excluded 5 (4%) based on the exclusion criteria, which left 120 cases for the analysis. Of these, 43 (35.8%) were reports of reattempted suicide, while 77 (64.2%) were reports of first-time SA. Additionally, 40 cases (33%) were reported in the last year, evincing a concerning increase in childhood suicidal behaviour (Table 1).

The variables for which we found a percentage of suicide reattempt greater than 40% (Table 2) were: age 7 to 9 years (44.7%), year 2021 (50%), rural setting (41%), child maltreatment (53.1%), completed suicide in a family member (50%), PSI (56.8%), suicide plan (50%), history of violence or sexual abuse (56.5%), history of psychiatric disorder (45.8%), hanging (46.2%), and use of a sharp object (67.7%). The variables found to be significantly associated were: child abuse ($P < .05$), PSI ($P < .005$), history of violence or sexual abuse ($P < .05$), use of a sharp object ($P < .001$), and self-poisoning ($P < .001$). We did not find statistically significant differences based on any sociodemographic variable.

In order to identify the risk factors with the strongest association to recurrent SA, we included variables with a *P* value of less than 0.20 in the analysis of the bivariate

Table 1 Sociodemographic characteristics, risk factors and methods used in suicide attempts in children aged less than 12 years in Boyacá.

Variable	n (%) (N = 120)
Sociodemographic	
Year	
2018	12 (10%)
2019	21 (17.5%)
2020	12 (10%)
2021	12 (10%)
2022	23 (19.2%)
2023	40 (33.3%)
Pandemic status	
Pre-pandemic	35 (29.2%)
Pandemic	29 (24.2%)
Post-pandemic	56 (46.6%)
Age group	
4–6 years	3 (2.5%)
7–9 years	38 (31.7%)
10–11 years	79 (65.8%)
Sex	
Male	62 (51.7%)
Female	58 (48.3%)
Residential setting	
Urban	81 (67.5%)
Rural	39 (32.5%)
Socioeconomic status	
Low	109 (90.8%)
Middle or high	11 (9.2%)
Risk factors	
School-related problems	
Yes	42 (35%)
No	78 (65%)
Child maltreatment	
Yes	32 (26.7%)
No	88 (73.3%)
Family-related problems	
Yes	55 (45.8%)
No	65 (54.2%)
Suicide of a family member	
Yes	8 (6.7%)
No	112 (93.3%)
Persistent suicidal ideation (PSI)	
Yes	37 (30.8%)
No	83 (69.2%)
Suicide plan	
Yes	12 (10%)
No	108 (90%)
History of violence or sexual abuse	
Yes	23 (19.2%)
No	97 (80.8%)
History of psychiatric disorder	
Yes	24 (20%)
No	96 (80%)
Methods	
Hanging	
Yes	39 (32.5%)
No	81 (67.5%)

Table 1 (Continued)

Variable	n (%) (N = 120)
Sharp objects	
Yes	31 (25.8%)
No	89 (74.2%)
Jumping from a height	
Yes	14 (11.7%)
No	106 (88.3%)
Poisoning	
Yes	41 (34.2%)
No	79 (65.8%)
Type of substance	
Medicines	26 (63.4%)
Other	15 (36.6%)

logistic regression model. This allowed us to find the best explanatory model with the best fit (Hosmer and Lemeshow Test: $P > .05$; Cox and Snell R^2 , 0.458) of the risk factors for recurrent childhood suicidal behaviour (Table 3), which included: child maltreatment (OR, 6.22; $P < .05$), PSI (OR, 30.91; $P < .001$), history of violence or sexual abuse (OR, 13.10; $P < .05$), and use of sharp objects (OR, 46.45; $P < .001$).

Last of all, the first two dimensions of the MCA explained 57.7% of the variance. Fig. 1 shows the 3 identified profiles, starting with the “first SA” profile, where there was a clear predominance of poisoning as the used method and absence of PSI, violence, abuse and maltreatment. Then there is the “one previous SA” profile, characterised by the use of sharp objects and the presence of PSI. Finally, the “two or more previous SA” profile showed a tendency to use hanging and the presence of a history of violence or sexual abuse and child maltreatment.

Discussion

Suicidal behaviour has been a public health problem requiring extensive effort in its study and prevention, which represents a challenge given its multifactorial aetiology, influenced by various genetic, developmental, neurobiological, personal, and social factors.¹⁶ However, the literature on the subject maintains the consensus that a history of previous SAs is a risk factor associated with death by suicide.^{11,10}

Despite this, there have been no studies focusing on the factors leading children aged less than 12 years to carry out more than one SA, and research on the adolescent population has been prioritised,^{8,11} which is the reason we sought to carry out bivariate and multivariate analyses to identify risk factors and profiles associated with multiple SA in children.

However, before analysing recurrent suicidal behaviour, it is important to consider some general data on childhood suicide attempts. For instance, 46.5% of the attempts occurred in the post-pandemic period (after 2022 Jun 30). Although this variable was not associated with the rate of suicide reattempt, it is important to take it into account. Consistent with previous studies,^{6,17} this finding illustrates how the SARS-CoV-2 pandemic has been a relevant factor associated with the increase in suicidal behaviour among youth.

Table 2 Sociodemographic characteristics, risk factors and methods used in first and repeated suicide attempts in children aged less than 12 years in Boyacá.

Variable	Repeated suicide attempt (n = 43) n (%)	No previous attempts (n = 77) n (%)	P (χ^2)
Sociodemographic			
Year			
2018	3 (25%)	9 (75%)	.739
2019	9 (42.9%)	12 (57.1%)	
2020	3 (25%)	9 (75%)	
2021	6 (50%)	6 (50%)	
2022	8 (34.8%)	15 (65.2%)	
2023	14 (35%)	26 (65%)	
Pandemic status			
Pre-pandemic	12 (34.3%)	23 (65.7%)	.955
Pandemic	11 (37.9%)	18 (62.1%)	
Post-pandemic	20 (35.7%)	36 (64.3%)	
Age group			
4–6 years	1 (33.3%)	2 (66.7%)	.383
7–9 years	17 (44.7%)	21 (55.3%)	
10–11 years	25 (31.6%)	54 (68.4%)	
Sex			
Male	21 (33.9%)	41 (66.1%)	.643
Female	22 (37.9%)	36 (62.1%)	
Residential setting			
Urban	27 (33.3%)	54 (66.7%)	.410
Rural	16 (41%)	23 (59%)	
Socioeconomic status			
Low	39 (35.8%)	70 (64.2%)	.969
Middle or high	4 (36.4%)	7 (63.6%)	
Risk factors			
School-related problems			
Yes	12 (28.6%)	30 (71.4%)	.223
No	31 (39.7%)	47 (60.3%)	
Child maltreatment			
Yes	17 (53.1%)	15 (46.9%)	.017 ^a
No	26 (29.5%)	62 (70.5%)	
Family-related problems			
Yes	19 (34.5%)	36 (65.5%)	.787
No	24 (36.9%)	41 (63.1%)	
Suicide of family member			
Yes	4 (50%)	4 (50%)	.387
No	39 (34.8%)	73 (65.2%)	
Persistent suicidal ideation (PSI)			
Yes	21 (56.8%)	16 (43.2%)	.001 ^b
No	22 (26.5%)	61 (73.5%)	
Suicide Plan			
Yes	6 (50%)	6 (50%)	.281
No	37 (34.3%)	71 (65.7%)	
History of violence or sexual abuse			
Yes	13 (56.5%)	10 (43.5%)	.021 ^a
No	30 (30.9%)	67 (69.1%)	
History of psychiatric disorder			
Yes	11 (45.8%)	13 (54.2%)	.253
No	32 (33.3%)	64 (66.7%)	
Methods			
Hanging			
Yes	18 (46.2%)	21 (53.8%)	.102
No	25 (30.9%)	56 (69.1%)	
Sharp objects			

Table 2 (Continued)

Variable	Repeated suicide attempt (n = 43) n (%)	No previous attempts (n = 77) n (%)	P (χ^2)
Yes	21 (67.7%)	10 (32.3%)	.000 ^c
No	22 (24.7%)	67 (75.3%)	
Jumping from a height			.547
Yes	4 (28.6%)	10 (71.4%)	
No	39 (36.8%)	67 (63.2%)	
Poisoning			.000 ^c
Yes	5 (12.2%)	36 (87.8%)	
No	38 (48.1%)	41 (51.9%)	
Type of substance			.866
Medicines	3 (11.5%)	23 (88.5%)	
Other	2 (13.3%)	12 (86.7%)	

^a P < .05.

^b P < .005.

^c P < .001.

Table 3 Bivariate logistic regression model for estimation of risk factors for reattempted suicide in children aged less than 12 years in Boyacá.

Variable	B	Wald	DF	P	Exp(B) odd ratio (OR)	95% CI EXP(B)
Child maltreatment	1.827	4.108	1	.043	6.218	1.062–36.398
Persistent suicidal ideation (PSI)	3.431	12.675	1	.000	30.912	4.675–204.394
History of violence or sexual abuse	2.573	6.421	1	.011	13.100	1.791–95.829
Sharp objects	3.838	13.107	1	.000	46.451	5.815–371.073
Constant	–3.714	17.344	1	.000	0.024	

*Model: $\chi^2 = 49.008$; P < .001; Cox and Snell $R^2 = 0.458$.

** Hosmer-Lemeshow test: $\chi^2 = 17.88$; P > .05.

Additionally, we found no significant differences in any of the sociodemographic variables. Among these variables, sex stands out. Previous studies investigating the gender paradox in suicidal behaviour have not found differences between men and women in recurrent suicidal behaviour.^{11,18,19} However, this finding has significant implications for understanding the persistence of suicidal behaviour, as it appears to contradict data on suicide attempts and completed suicides in each sex,²⁰ especially in regard to the marked differences between boys and girls during childhood.¹²

Starting with the frequency of repeated SA in the population under study, we found a rate of 35.8%. Although it was a lower rate compared to previous national studies in the child and adolescent population,²¹ it is still worrying given the early ages at which SAs occurred, in addition to a higher recurrence of suicidal behaviour in youth compared to other continents,^{18,22} which makes this concern more pressing and further underscores the need to address and prevent suicidal behaviour in early childhood in developing countries.

Thus, the main risk factors that predicted recurrent suicide attempts in children were child maltreatment (OR, 6.22; P < .05), PSI (OR, 30.91; P < .001), a history of violence or sexual abuse (OR, 13.10; P < .05), and the use of sharp objects (OR, 46.45; P < .001). A previous meta-analysis reported an association with early life adversity (ELA), such as violence, sexual abuse or physical, psychological or sex-

ual maltreatment, which acted as a predictor of suicidal behaviour in childhood,⁹ and there is also evidence that ELA is related to the development of emotional problems and psychiatric disorders, as well as neurobiological alterations in brain pathways that are important for emotional recognition and regulation.²³

In this sense, previous work has shown that the presence of maternal abuse and neglect at three years of age and the presence of mental health symptoms and aggression problems at five years of age considerably increase the risk of presenting suicidal ideation at nine years of age (OR, 3.50).²⁴ The above highlights the consequences of ELA on children's mental health and evinces the need to carry out preventive strategies against all forms of child maltreatment, abuse or violence to avoid the development of both psychiatric disorders and early suicidal behaviour²⁵ in addition to addressing their treatment to reduce the recurrence of SAs in children.

It is important to mention that while the presence of a previous mental disorder was associated with a higher frequency of repeated SA (45.8%), the differences in this variable were not statistically significant (P > .05). This may be attributed to underreporting, given the limitations in the diagnostic methodology of the INS.356 reporting form, as it would be advisable to improve notification protocols and to investigate the aetiology and role as a mediator of various psychiatric disorders in childhood suicidal behaviour and its recurrence.

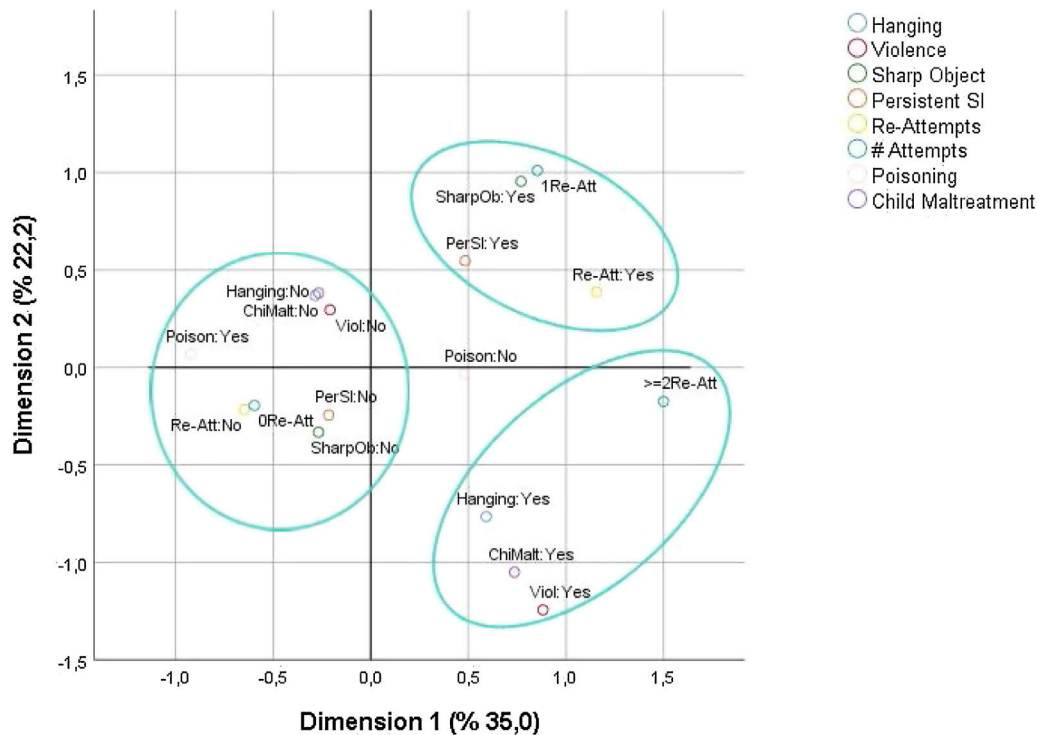


Figure 1 Profiles of the recurrent suicide attempt in children in Boyacá, Colombia, 2018–2023. Variables : violence (history of violence or sexual abuse), persistent suicidal ideation (SI), number (#) of attempts (0: zero previous attempts; 1: one previous attempt; 2: two or more previous attempts), child maltreatment, hanging, poisoning and sharp objects. Answer categories: 0 (no), 1 (yes).

The first profile, which we called “first SA” because it was observed in children without a previous history of SA, encompasses cases with poisoning as the method, without PSI or a history of violence or abuse, and, thus, could be explained by indeterminate acts. A previous study that analysed SAs by self-poisoning pointed at factors such as cognitive immaturity and age-related impulsivity as possible contributors to the development of suicidal behaviour,²⁶ but more research is needed in this regard.

The second profile, “one previous SA”, involves the use of sharp objects and the presence of PSI. These features evince an evolution in childhood suicidal behaviour from impulsive acts in the first SA to increasingly elaborate thoughts of death and the use of more lethal methods. Although traditionally there is a generalised belief that children do not really think about death and suicide, recent evidence challenges this preconception and shows that various biopsychosocial factors that affect children’s mental health can give rise to mature conceptions of death and suicide from an early age.^{23,27,28}

The last profile, “two or more previous SAs”, included the use of hanging as the primary method, a history of violence or sexual abuse and child maltreatment, in agreement with previous studies that found hanging was the method associated with the highest risk for completed suicide in this population,²⁹ as well as the relationship of ELA, mainly child maltreatment (OR, 2.62),³⁰ with paediatric suicidal behaviour.^{31,32}

Finally, taking into account that a high proportion of childhood suicidal behaviour is detected and reported

in emergency care departments and given that interventions limited to emergency department-based care without continuity of care or follow-up have been found to be insufficient for the prevention of repeated SAs in children,³³ strategies that go beyond the individual and integrate family- and community-based interventions are necessary to prevent recurrent suicidal behaviour in youth.³⁴

The main strength of this study was the incorporation of a little-studied dependent variable in childhood suicidal behaviour, recurrence, which can pave the way for further studies focusing on the subject and thus guide the development of better strategies of prevention and intervention in paediatric suicide. This analysis is a first step that may have applicability and external validity in similar sociodemographic contexts.

The limitations of this study were related to the quality and depth of the information analysed; since we used secondary data, there was an evident loss of information on important variables, such as sex and gender expression, and individual factors such as impulsivity.

For several of the variables under study, no standardized approach had been established to verify their presence or absence, including risk factors such as child maltreatment or abuse, so these data depended on the quality of the interview conducted by the reporting professional. Similarly, in the presence of a previous diagnosis of mental health disorder, there was uncertainty as to whether a formal diagnosis had been made and the quality of the diagnosis, aspects that may also limit the recognition of disorders significantly asso-

ciated with suicidal behaviour in children, such as ADHD or behaviour disorders.

In this sense, it is recommended that future studies address, based on primary data, the variables associated with the recurrence of suicidal behaviour in childhood, such as personality traits (eg impulsivity or aggressiveness), sex, specific mental disorders and different types of violence and abuse.

Conclusion

The study of suicidal behaviour in children aged less than 12 years to date has been scarce, probably due to the general belief that at this age there is no clear thought of death or suicide. However, there is evidence that various factors can give rise to clear desires for death by suicide in children, and that the early paediatric suicidal spectrum is a real problem in which variables such as recurrence have not been sufficiently studied.

The predictors for repeated SA in childhood identified in our study were a history of violence or sexual abuse, child abuse, PSI and the use of sharp objects, which allowed the identification of 3 childhood SA profiles, which were: “first SA” with the method of poisoning and absence of ELA and PSI, followed by “single previous SA” with presence of PSI and use of a sharp object and lastly “2 or more previous SAs” with a previous history of exposure to violence, sexual abuse or child maltreatment and use of more lethal methods, such as hanging. These findings evince the need to intervene in social and family settings in strategies for prevention of recurrent suicidal behaviour in children.

Ethical considerations

The study was based on the review of anonymized data, respecting the ethical standards for health research. The current article does not contain any personal or clinical data.

Conflict of interest

The authors declare that they have no conflicts of interest.

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