WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Psychopathology associated with suicide attempts among children and adolescent of the Democratic Republic of Congo

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A B S T R A C T

Suicidal behavior is increasing in the Democratic Republic of Congo and affects the young population. The aim of our research is to describe the sociodemographic and psychopathological aspects linked to suicide attempts in children and adolescents. A cross sectional design was used. 50 cases of suicide attempt were recruited from the pediatric department of the Kinshasa General Hospital, between June 2022 and April 2023. our study identified sociodemographic and psychopathological factors, history of mistreatment, education, characteristics of the suicide attempt, suicidal intentionality using the Suicide Intent Scale (SIS) and the Mini International Neuropsychiatric Interview (MINI). The average age was 12.4 years with extremes between 7 and 16 years, however the sex ratio was 0.56. Academic failure affects 86% of suicide cases. In 38% of cases, including reattempt; history of self-harm was found in the same proportions. abuse was revealed in 46% of cases. Ingestion of medications was the most common method, with a high proportion of cases of suicide due to the use of psychotropic medications. A significant difference between the sexes was revealed, in relation to the method used for suicidal attempts, thus boys resorted more to physical methods (p=0.04) and girls to poisoning (p=0.001). Suicidal intention was high in 44% of cases. A major depressive episode and an adjustment disorder were the most frequent conditions and respectively in 58% and 24% of cases. In conclusion, depressive disorders and abuse appear to be risk factors associated with suicide attempts in the population of children and adolescents; These factors must be of extreme consideration to better establish effective strategies for suicide prevention in this age group.

Keywords: adolescent, child, psychological disorders, suicide attempt.

Introduction

Suicide is a major social and public health problem and has a global mortality rate of 16/100,000 (Wasserman, 2009). It is the second cause of death among women, the third among men aged 10 to 24 years (WHO, 2004) and the fourth cause of death among young people aged 15 to 19 years.

Adolescence is a time of great change, during which childhood becomes adulthood. This is a period of development in three main areas: physical, cognitive, and socio-emotional development. Adolescent development is hindered not only by external forces, but also by internal conflicts, including egocentrism and identity crisis (Ferrer-Wrerder, 2019). Most theories assert that there is an overwhelming desire, regardless of gender and age, to maintain, protect, and enhance individual self-esteem (Owens, 1994).

Suicidal behavior generally includes the following stages: suicidal ideation, suicide attempts, and completed suicide (Li, 2016). Previous studies have found a strong relationship between suicide attempts and suicidal ideation (Nock, 2008). Suicidal ideation is a recognized precursor to suicide attempts, which can lead to successful suicide (Brown, 2000). Suicidal ideation and attempts are strongly predictive of death by suicide but can also lead to negative consequences such as injury, hospitalization, and loss of liberty, imposing a significant financial burden on society (Klonsky, 2016). However, compared to high-income countries, there is little information on the epidemiology of adolescent suicide and suicidal behavior in low- and middle-income countries (McKinnon, 2016).

In the Democratic Republic of Congo, the prevalence of suicide is not clearly defined since there is no national suicide register. Our study aimed to study the sociodemographic and clinical profile of a population of suicidal children and adolescents. Thus, we were interested in evaluating psychopathological disorders and environmental factors as well as suicidal intention in this population.

Methodology

Our study is descriptive and cross-sectional, it was conducted among a population of suicidal children and adolescents during the period from June 2022 to June 2023. Authorization from the local ethics committee was obtained.

Study population and sample

Children and adolescents who consulted following a suicide attempt in the pediatric department of the General hospital of Kinshasa were included in our study. Children with Mental retardation was excluded, as well as those whose suicide attempt occurred more than 48 hours ago: except for cases presenting an alteration of the neurological state, these subjects were examined after regaining consciousness. The assessment of the suicides was made after informing the parents of the purpose of the study and obtaining their consent, by a child psychiatrist resident assigned to the pediatric department of the General Hospital of Kinshasa during the study period. These interviews were carried out following the initial psychological interview, carried out in an emergency context and the aim of which was to decide on treatment and assess the degree of emergency and the potential for recurrence.

Materials

We used a pre-established form designed for the study of sociodemographic characteristics, assessment of the environment, education, and characteristics of the suicide attempt. It included items concerning the status of parents, relationships with peers, the current presence and history of maltreatment, the questionnaires, which are divided into 16 modules explore anxiety disorders, attention deficit hyperactivity disorder, conduct disorders, eating disorders, mood disorders, post-traumatic stress disorder, substance abuse and dependence, oppositional defiant disorder, and psychoses. They do not explore specific developmental disorders or attachment disorders.

The assessment of suicidal intentionality was carried out using the Suicide Intent Scale (SIS) questionnaire, translated into French for this present study, but not validated. This is a hetero questionnaire, developed by Beck in 1974, revised by Pierce in 1977, which is intended to assess the intensity of the patient's desire for death at the time of their suicide attempt and predicts suicide risk. The version used is divided into three sections: the circumstances of the suicide attempt (six questions), the words reported by the patient (self-report) (four questions) and two questions on lethality assessed by the doctor. The total suicidal intentionality score ranges from 0 to 25: low intentionality: 0-3; medium intentionality: 4-10; high intentionality: 11-25.

Statistical analysis

Data entry and statistical analysis were carried out using SPSS version 16.0 software. We compared two subgroups, children under 13 years old, and those aged 13 years and over. The Chi square test was used to compare the percentages of dichotomous and categorical qualitative variables and the significance level was set at 5%.

Results

Sociodemographic and family characteristics

Our population consisted of 50 cases of suicide attempts. Seventy-eight percent of this population were recruited in the pediatric department of the Kinshasa general hospital and 22% of cases were initially examined in other healthcare structures where they were admitted (Kinshasa Pediatric Hospital). The sex ratio was 0.56. The average age of our population was estimated at 12.4 years with extremes ranging from 7 to 16 years. 42% of cases were under 13 years old and 58% were between 13 and 16 years old. In our evaluation, 38% were the youngest of their siblings, 28% were the youngest, 24% the eldest and 10% were the only child of the parental couple. Nearly half of the cases (48%) lived in a context of parental separation or divorce, and in 12% of cases, a climate of domestic violence was revealed.

The relationship with peers was considered satisfactory in 68% of cases and conflictual in 32% of cases. The socio-economic level was estimated as high in 24% of cases, medium in 54% of cases and low in 22% of cases. In terms of education, we note that most children/adolescent were in school (98%). In 86% of cases, performance at school was disrupted during the year preceding the consultation, with the presence of academic failure. (table 1)

Table 1: Sociodemographic characteristics and family status by gender and age group

VARIABLES		Population of suicides N=50		Age <13 ans N=21		Age ≥13 ans N=29		p
		%	N	%	N	%	N	
Gender	Female	64,0	32	61,9	13	65,5	19	0,79
	Male	36,0	18	38,1	8	34,5	10	
	Low	22,0	11	4,8	1	34,5	10	

Socio-economic Status	**Middle**	**54,0**	**27**	**71,4**	**15**	**41,4**	**12**	**0,03**
	High	**24,0**	**12**	**23,8**	**5**	**24,1**	**7**	
Family status	**Parental separation, divorce**	**48,0**	**24**	**52,38**	**11**	**44,83**	**13**	**0,59**
	Family with two parents present	**52,0**	**26**	**47,62**	**10**	**55,17**	**16**	
	Other situation	**0**	**0**	**0**	**0**	**0**	**0**	
Violence familiale	**present**	**12,0**	**6**	**4,76**	**1**	**17,24**	**5**	**0,18**
	absent	**88,0**	**44**	**95,24**	**20**	**82,7**	**24**	
Relation with peer	**Good**	**68,0**	**34**	**81,0**	**17**	**58,6**	**17**	**0,1**
	disturbed	**32,0**	**16**	**19,0**	**4**	**41,4**	**12**	

Personal and family history and Exposure to abuse

history of mental illness in the family was discovered in two-thirds of cases, with mood disorders in 52% of cases, and a family history of suicide attempt was noted in 22%. A personal history of chronic organic pathologies was recorded in 22% of cases. These were epilepsy (8%), asthma (4%) and juvenile diabetes (6%). A quarter of the patients had a known psychiatric history such as mood disorders (8%), attention deficit hyperactivity disorder (8%), conduct disorder (6%) and anxiety disorders (2%). Regarding a history of suicidal behavior, 38% had already made at least one suicide attempt (with 8% of cases more than one suicide attempt), and a history of self-mutilation was registered in 36% of cases. (table 2)

Among our study population, 46% reported having suffered of abuse, most often physical abuse (32%). Two patients suffered sexual violence (4%) and 10% were victims of repeated "psychological" mistreatment such as: rejection, humiliation, or intimidation (including in a school environment). The family environment was incriminated in 36% of cases and the school environment in 10% of cases.

Table 2: Family and personal history and exposure to abuse by gender and age group

		Population of suicides N=50		**Age <13 ans N=21**		**Age ≥13 ans N=29**		**p**
VARIABLES		**%**	**N**	**%**	**N**	**%**	**N**	
Gender	**Female**	**64,0**	**32**	**61,9**	**13**	**65,5**	**19**	**0,79**
	Male	**36,0**	**18**	**38,1**	**8**	**34,5**	**10**	
	disturbed	**32,0**	**16**	**19,0**	**4**	**41,4**	**12**	
Family history of mental disorders	**+**	**66,0**	**33**	**57,1**	**12**	**72,4**	**21**	**0,28**
	-	**34,0**	**17**	**42,9**	**9**	**27,6**	**8**	
Family history of suicide attempts	**+**	**22,0**	**11**	**9,5**	**2**	**31,0**	**9**	**0,07**
	-	**78,0**	**39**	**90,5**	**19**	**69,0**	**20**	
Personal somatic history	**+**	**22,0**	**11**	**23,8**	**5**	**20,7**	**6**	**0,79**
	_	**78,0**	**39**	**76,2**	**16**	**79,3**	**23**	
Personal Psychiatric history	**+**	**24,0**	**12**	**19,0**	**4**	**27,6**	**8**	**0,51**
	-	**76,0**	**38**	**81,0**	**17**	**72,4**	**21**	
Personal history of suicide attempts	**+**	**38,0**	**18**	**49 ,6**	**10**	**20,7**	**9**	**0,79**
	-	**62,0**	**31**	**52,4**	**11**	**69,0**	**20**	
Personal history of self-mutilation	**+**	**36,0**	**18**	**38,1**	**8**	**34,5**	**10**	**0,79**
	-	**64,0**	**32**	**61,9**	**13**	**65,5**	**19**	
Abuse	**+**	**46,0**	**23**	**23,8**	**5**	**62,07**	**18**	**0,007**
	-	**54,0**	**27**	**76,19**	**16**	**37,9**	**11**	
Type of abuse	**Physical**	**69 ,5**	**16**	**40,0**	**2**	**77,78**	**14**	**0,14**
	Sexual or psychological	**30,4**	**7**	**60,0**	**3**	**22,2**	**4**	

Place of abuse	**family**	**78,2**	**18**	**19,0**	**4**	**48,3**	**14**	**0,7**

An event preceding the occurrence of the suicide attempt was found in 62% of cases: family conflict (26%), conflict with peers and/or conflict in the school environment (12%) or a romantic breakup (24%). The assessment of suicidal intentionality by the SIS found a low level of intentionality in 14%, medium in 42% and high in 44% of suicidal people. Symptoms preceding the suicidal gesture were found in 80%, these were symptoms such as irritability, withdrawal, anxiety, and behavioral disorders. These symptoms had been present for more than three months before the suicide attempt in 72% of cases. Sixty-six percent of suicides had somatic repercussions following their suicide attempt, requiring medical treatment; a third of them (22%) required hospitalization in paediatrics or intensive care.

Suicide methods of suicide attempt and reattempt

The most frequent suicidal means was medicinal ingestion which concerned 78% of cases (n=39), the intoxication was multiple medicine in 26% of cases (n=13), psychotropic molecules were the most used medications, in 42% (n=21). The suicides resorted to attempted hanging or strangulation in 10% of cases (n=5), other physical means in 10% of cases (defenestration and attempted rush in front of a vehicle) and one case of ingestion of rat poison: with a significant difference depending on gender. Boys more frequently resorted to physical means (p=0.04) and girls to medicinal means (p=0.001). (table 3). Concerning the distribution of suicide attempts according to the month of occurrence and according to the time of occurrence, the frequency of suicide attempts was higher during the months of March (9 cases, 18%) and April (8 cases, 16%); and occurred more at the end of the day: 16% at 7 p.m., 20% at 8 p.m.

Table 3: Suicide method by gender and age group

VARIABLES		**Population of suicides N=50**		**Age <13 ans N=21**		**Age ≥13 ans N=29**		**p**
		%	**N**	**%**	**N**	**%**	**N**	
Gender	**Female**	**64,0**	**32**	**61,9**	**13**	**65,5**	**19**	**0,79**
	Male	**36,0**	**18**	**38,1**	**8**	**34,5**	**10**	
	Scool	**21,7**	**5**	**4,8**	**1**	**13,8**	**4**	
Method used for suicide attempt	**Médicaments et toxique**	**80,0**	**40**	**85,7**	**18**	**75,9**	**22**	
	Strangulation or hanging	**10,0**	**5**	**0**	**0**	**17,2**	**5**	**0,11**
	Taking risk	**10,0**	**5**	**14,3**	**3**	**6,9**	**2**	
Suicide method / accessibility	**+**	**72,0**	**36**	**71,4**	**15**	**72,4**	**21**	**0,94**
	-	**28,0**	**14**	**28,6**	**6**	**27,6**	**8**	

Table 4: Psychological characteristics by gender and age group

VARIABLES		**Population of suicides N=50**		**Age <13 ans N=21**		**Age ≥13 ans N=29**		**p**
		%	**N**	**%**	**N**	**%**	**N**	
Gender	**Female**	**64,0**	**32**	**61,9**	**13**	**65,5**	**19**	**0,79**
	Male	**36,0**	**18**	**38,1**	**8**	**34,5**	**10**	
	-	**28,0**	**14**	**28,6**	**6**	**27,6**	**8**	
Existence of psychiatric symptoms preceding the suicide attempt	**+**	**80,0**	**40**	**71,4**	**15**	**86,2**	**25**	**0,22**
	-	**20,0**	**10**	**28,6**	**6**	**13,8**	**4**	
Organic repercussions of attempted suicide	**+**	**66,0**	**33**	**57,1**	**12**	**72,4**	**21**	**0,28**
	-	**34,0**	**17**	**42,9**	**9**	**27,6**	**8**	
Have heard of suicide before	**+**	**76,0**	**38**	**85 ,7**	**18**	**69,0**	**20**	**0,17**
	-	**24,0**	**12**	**14,3**	**3**	**31,0**	**9**	
Psychopathological disorder (MINI Kid)	**Adaptation disorder with anxiety and depression**	**24,0**	**12**	**42,9**	**9**	**10,3**	**3**	
	Other or no characterized disorder	**76,0**	**38**	**57,1**	**12**	**88,7**	**26**	**0,007**
Score SIS	**Low or medium risk**	**56,0**	**28**	**71,4**	**15**	**44,8**	**13**	**0,06**

Psychopathological diagnoses

A significant correlation between the existence of a psychological disorder and an average suicidal intentionality to be raised in the SIS was found (p=0.002). (Table 5) At the end of the psychopathological interview and the clinical evaluation, the treatment was immediately initiated for outpatient in 58% of cases and 42% were hospitalized in child psychiatry.

Table 5:Psychopathological diagnosis established by MINI-Kid

Diagnoses	**N=50**	**%**
Major depressive episode	**29**	**58,0**
Adaptation disorder with both anxiety and depressed mood	**12**	**24,0**
Conduct disorder	**3**	**6,0**
Substance abuse	**3**	**6,0**
No psychiatric problems	**3**	**6,0**

Access to information regarding suicide

In our population, 76% of cases declared having already heard of suicide and had knowledge on the subject. The sources of this information were essentially the family in 32% of cases, the media, and social networks in 22% and the extra-familial environment in 16% of cases.

Comparison of the subgroups according to age

The comparison of the two groups according to age did not show significant differences in terms of sociodemographic characteristics, medico-psychiatric history, suicidal methods, access to information on suicide and SIS scores (Tables: 1,2,3,4). On the other hand, clinically, adjustment (adaptation) disorder with both anxiety and depressed mood was significantly more frequent in children aged less than 13 years compared to older children (p = 0.007) (Table 1). In addition, suicides over the age of 13 were more exposed to mistreatment than those under the age of 13 (p=0.007).

Discussion

A clear female predominance found in our study is consistent with literature data (Rhodes AE et al., 2014 & Zakharov S et al., 2013). Indeed, girls from pre-adolescence have more suicidal ideas and make more suicide attempts than boys. The average age of our population was 12.4 years, it was partly determined by the age limit of the healthcare structure where the study took place which is 16 years. Studies carried out in a young population find an average age comparable to that of our sample, thus in a Moroccan study, the average age was 12.5 years (Salimi S, et al., 2013). In a French study carried out on 517 suicides aged under 15 admitted to pediatric emergency departments, the average age was 14 years and that of the youngest suicide was 7 years (Giraud P, et al., 2013). The rejuvenation of the population of suicides may be linked to the increasingly frequent exposure of children to psychosocial adversity factors and to the adversities experienced by the parental couple and the family.

A context of divorce or parental separation was observed in almost one in two cases, which is significantly higher than the data from the general Congolese population from the same year in which the present study was carried out (WHO, 2021). A Moroccan study found similar results (Salimi S et al., 2013). It is the lack of family cohesion that has been suggested as having a role in the emergence of suicidal behavior (Sheftall AH et al., 2013). The socio-economic profile of the families of the suicides in our study, was considered average in half of the cases and low in 22%. Even if the link between low socioeconomic level and suicide attempts has been suggested in the adolescent population with robust methodologies, this factor has generated controversy (Ko MJ et al., 2014 & Peyre H et al.,2017). The difficulties and academic failure found in a high proportion (86% of suicides) argue in favor of the importance of this risk factor, and in fact children failing at school are less resilient in the face of adversity and project themselves less in the future than their peers who succeed in their education. An association between academic difficulties and suicidal behavior has been reported by certain studies (Toros F et al., 2004). They therefore constitute one of the factors to be taken into consideration for the prevention of suicide risk.

A context of abuse was reported in almost half of the cases, most often emanating from the family environment, and found mainly in subjects aged 13 and over. Exposure to abuse is a well-documented risk factor for suicide in the literature, both for suicidal attempts and for completed suicide (Evans E et al., 2005 & Miller AB et al., 2013). In a study conducted by Séguin (2011), on the life trajectories of young suicides, exposure to sexual or physical violence was found significantly from early childhood compared to control subjects. Several authors agree on the fact that sexual abuse

is a weakening factor for the mental health of young people in general and a specific risk factor for suicidal behavior (Miller AB et al., 2013). A meta-analysis that included longitudinal studies and a total of 8733 participants showed that a history of sexual abuse is associated with the of suicide reattempts, after controlling for other genetic and environmental risk factors (Devries KM et al., 2014). In our study, this factor was rarely found (only 4% of suicides were victims of sexual abuse). This low rate can be explained by the small size of our sample, but also by the reluctance of young people to address this issue., which remains a taboo subject in the Congolese context. In addition, the first clinical assessment of the child and young person following their suicide attempt is a moment of great psychological distress, which makes addressing the issue of mistreatment, specifically sexual abuse, delicate.

Psychiatric family history was found in 2/3 of cases, mainly with mood disorders, and a family history of suicide attempt was noted in 22% of cases. These results are supported by other researchers; parents' mental illness is considered a risk factor for suicide in their children (Toros F et al., 2004).

Chronic organic illness was found in almost a quarter of our patients. Data from the literature indicate that the presence of an associated somatic pathology increased the risk of suicide in patients suffering from psychiatric comorbidity (Barnes AJ et al 2010). As for a history of child psychiatric disorders, they were found in a quarter of our patients. This result is lower than what is found in other studies, Berthod and colleagues (2013) report pre-existing child psychiatric monitoring in suicidal children in 69% of cases. This difference can be explained by the lack of provision of child psychiatric care in the Congolese context. As for a personal history of suicide attempts and a history of self-mutilation, they were found in more than a third of our patients. It has been established by longitudinal follow-up studies after a suicide attempt, as well as psychological autopsy studies on young suicides, that suicide attempts are predictive of subsequent suicidal acts and this risk factor would be independent of other variables (Seguin M et al., 2011; Peyre H et al., 2017 & Wong JP et al., 2008). As for self-mutilation, some authors consider it to be part of suicidal behavior, having common risk factors; for these authors, self-mutilation and completed suicide would be the extremes of the same spectrum (Sinclair J, 2005).

The study of the time course showed that the greatest number of suicide attempts occurred during the months of March and April with nine and eight cases respectively. A study carried out on a population of 2393 Czech suicides aged between 9 and 18 years showed that 31.3% of suicide attempts took place in spring (March, April, May) with a significant difference compared to other seasons (Zakharov et al., 2013). A French study carried out among suicidal children recorded a peak in June, concomitant with the end of the school year which is a time of school assessment (Berthod C et al., 2013). Explanatory hypotheses have been put forward, notably climatic factors and school schedules. In our study, the months of June and July correspond in the Democratic Republic of Congo to the exam's period at the end of the school year and therefore constituted a period of significant stress. At a circadian level, the highest percentages were observed between 2 p.m. and 8 p.m., our results are consistent with the Czech study, which found 40.7% of suicidal attempt occurring between 6 p.m. and midnight, 30.1% between 12 p.m. hours and 6 p.m., which differs from the times of occurrence in adult populations, mainly in the 10 p.m. to 7 a.m. time slot (Zakharov et al., 2017).

Seventy-eight percent of suicides in our study resorted to voluntary drug intoxication, significantly among girls. This has usually been found in Congolese and worldwide studies (Stordeur C et al., 2015: Salimi S et al., 2013 & Giraud P et al., 2013). Psychotropic drugs and medications containing paracetamol are the most frequently incriminated (Zakharov et al., 2013). Violent means, for their part, were rarer and observed significantly in boys, in accordance with data from the literature, boys are more at risk of completed suicide than girls (Seguin M et al., 2011 & Berthod C et al., 2013). Some authors have pointed out that children using violent methods were younger than those using non-violent methods (Berthod C et al., 2013).

The evaluation carried out using the SIS revealed an average suicidal intentionality in 42% and high in 44% of cases, with no difference depending on age between those under 13 and those 13 and over, which indicates a degree of premeditation, planning of the suicide attempt and/or a high desire for death, including in the suicidal child. This was not found in a study carried out with children under 12 years old, where suicidal intentionality was lower, suggesting differences in the genesis of the act and the representation of death depending on the age (Stordeur et al., 2015). This difference can be explained by the recruitment of our patients, taking place mainly in the Pediatric service, and therefore potentially overrepresenting situations of "serious" suicide attempts.

The high frequency of mental illness, in particular depression, in our study is explained by the nature of the recruitment of patients where the study took place, since until recently, the child psychiatric examination was not systematically requested by pediatric services from suicides, only in situations deemed problematic with a high risk of recidivism. In addition, the situation of the pediatric service, with the stigmatization of this hospital, implies that "less serious" suicide attempts were less subject to consultation in this institution.

Regardless, psychiatric disorders have been considered one of the main proximal risk factors for suicidal behavior, and depression is the most frequently incriminated pathology. In our population, major depressive disorder was found in 58% of cases followed by adjustment disorder in 24%, for the latter, significantly in children under 13 years old. In the study by Consoli et al., (2015) 64% of adolescents hospitalized in child psychiatry for suicide attempt had a diagnosis of major depressive episode, and the follow-up study after 6 months showed that major depressive disorder and hopelessness constituted risk factors for suicidality. Indeed, depression combines despair, unbearable psychological challenges,

pessimism, low self-esteem, and impulsivity, all these factors increase the suicidal potential. Furthermore, adjustment disorder has been mainly reported in studies of suicide attempts in children (Berthod C et al., 2013), which is consistent with our results; the high frequency of this disorder reflects the frequency of suicide attempts. in children in reaction to environmental factors leading to an overflow of adaptive capacities in the face of these situations.

Suicide attempts in pre-pubescent children have also been considered as a "manifestation of maladjustment" in the face of extreme distress in this age group who has not yet managed to tolerate frustration (Berthod C et al., 2013). As for conduct disorder and substance abuse, they were more rarely found in our population compared to data in the literature (Peyre H et al., 2017). Finally, in our series, we did not make a diagnosis of personality disorder, the age limit being 16 years, and the diagnostic instrument used, the MINI-KID, does not assess this diagnostic category. We also did not find any cases of schizophrenia or bipolar disorder. This could be explained by the young age of the subjects included in our sample, as well as the small size of our population.

In our Study, hospitalization in pediatric concerning psychopathological profile concerned 42% of cases. The hospitalization lasted a few days and aimed at a better psychosocial assessment and intensive care focused on individual psychotherapy and family support. According to French data, the duration of hospitalization decreases with age, and it should be systematic after any suicide attempt (Berthod C et al., 2013). In the Congolese context, pediatric hospitalization is determined by somatic indications and there are very few child psychiatry hospitalization services, so the alternative to hospitalization is follow-up in ambulatory with close encounters.

Furthermore, a report is often made after a suicide attempt by the child to the child protection delegate; this report is systematic when the action is serious and requires hospitalization in intensive care. It leads to protective measures, especially since mistreatment and other psychosocial factors are often found.

Child protection services in the DRC have recorded a significant increase in reports of suicide attempts and cases of child abuse in recent years. The care is therefore global, psycho-social and can sometimes involve the school environment. Finally, and given the weight of mental disorders in very young suicides, child psychological follow-up over a minimum period of one year is recommended with psychotherapy and family support possibly associated with pharmacological treatment (Berthod C et al., 2013).

The comparison of the two subgroups according to age did not show significant differences for all the characteristics sought apart from the adjustment disorder more frequent among those under 13 years old, and mistreatment more frequent among adolescents. Peyre and colleagues (2017) compared first-time suicides under the age of 13 versus first-time suicides aged over 13 and found that child suicide attempts were associated with maltreatment while suicide attempts of the adolescent were associated with the presence of a major depressive episode. This difference may be linked to the small size of our sample, but also to the child's difficulty in revealing the abuse to the clinician, especially when it emanates from the family environment. The use of validated questionnaires or scales intended for children and adolescents will make it possible to better assess exposure to mistreatment.

Limitation

The main limitation of our study is linked to the small size of our sample; in a future perspective, it would be important to carry out cross-sectional studies on larger samples. The second limitation concerns the recruitment bias linked to the characteristics of the healthcare structure where the study took place, an institution stigmatized by the population, with several cases of serious suicide attempts over-represented compared to other forms of attempted suicide. suicide. Finally, another limitation arises from the difficulties inherent in interviews carried out in an emergency context which do not make it possible to determine certain life events considered taboo.

Conclusion

In the DRC, the studies carried out remain few. The results of the present study provided better knowledge of the profile of suicidal children and adolescents. Thus, the latter confirmed the high frequency of depression in this population, often a reaction to the environmental context as well as a history of mistreatment found in almost one in two cases, the latter being a risk factor recognized by numerous studies. Suicidal intentionality is frequently high, and should be systematically assessed by caregivers, whether they are emergency physicians, pediatricians, psychologist, or child psychiatrists. The frequency of signs of psychological challenges, behavioral disorders and the occurrence of self-mutilation reported in the weeks and months preceding the act of suicide reinforce the need to implement targeted prevention strategies. These strategies should make it possible to improve the screening of children who present these warning signals but also of children at risk such as those exposed to psycho-social adversity factors and those who present psychopathological disorders.

In the Congolese context, this screening could be considered within the framework of school medicine on the one hand, and by social and child protection services which have developed significantly in recent years - on the other hand. Likewise, awareness among professionals who work with children and adolescents should be developed to prevent suicidal behavior and improve resilience factors among vulnerable subjects.

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