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Evaluation of Characterized Depressive Disorder in Children and Adolescents: A Study of 79 Cases

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Abstract **Original Research Article**

Depression in children and adolescents is a major mental health concern, being the leading cause of illness and disability in children over ten years old. It increases the risk of suicide, affects education, social interactions, and contributes to obesity, tobacco, and substance use. The aim of this study was to highlight the sociodemographic and clinical profile of depression in young individuals, identify risk factors, and discuss appropriate therapeutic options. We conducted a retrospective descriptive and analytical study, using a questionnaire completed jointly by children with characterized depressive disorder and their parents. The study included 79 participants. Statistical analysis was performed using Jamovi version 2.3.21.0 and Microsoft Excel 2021. We found a predominance of females, with an average age of 13.5 years. Antecedents of self-harm and family history of psychiatric disorders were risk factors for suicidal ideation. Common symptoms included sleep disturbances (89.9%), irritability (83.5%), and mood sadness (70.9%). Depression had a significant impact, with 88.6% experiencing social withdrawal and 81% showing decreased school engagement, reflecting the multidimensional effects of depression. Pharmacotherapy was used in 82.3% of cases. However, therapeutic adherence was only good in 60.4% of cases. In summary, this study provides crucial insights into the characteristics, risk factors, and treatments of depression in young individuals within a specific hospital setting. It reinforces knowledge while emphasizing the importance of early and personalized intervention to counteract negative consequences during this critical age.

Keywords: Depression, mental health concern, social interactions, psychiatric disorders.

INTRODUCTION

Depression in children and adolescents is a concerning mental health issue with significant implications for well-being, development, and quality of life in these vulnerable populations. Childhood and adolescent depression differ from depression in adults in terms of clinical presentation, etiological factors, and treatment response. Recognizing suggestive symptoms of this disorder is essential for rapid diagnosis and appropriate management to mitigate negative consequences.

According to a report by INSERM in December 2019, depression affects 15 to 20% of the population. The notion of depression in children and adolescents is relatively recent, with its inclusion in the classification of psychiatric disorders occurring only from the 1980s. Today, the existence of depression in children and adolescents is irrefutable. The prevalence of major depressive disorder in children and adolescents is estimated at approximately 2 to 8%, with higher rates among adolescents than younger children. This prevalence, coupled with the detrimental effects on psychosocial functioning and long-term development, underscores the importance of better understanding the theoretical aspects of this disorder.

However, diagnosing depression in the young is often challenging due to various factors. Depressive symptoms may be masked by other common psychiatric or physical disorders in children and adolescents. Additionally, young patients may struggle to express and verbalize their emotions, making detection of depressive signs more complex. Furthermore, variations in depressive symptom manifestation based on age, development, and cultural context require an individualized approach.

Depression stands as the primary cause of illness and disability in children over ten years old. It poses a significant risk factor for suicide, impacting

education, social interactions, and increasing the risk of obesity and tobacco and substance use.

Our study aims to highlight the sociodemographic and clinical profile that allows for the identification of depression in children and adolescents and to elucidate the risk factors associated with it. We will attempt to address elements concerning appropriate therapeutic management.

MATERIALS AND METHODS

We conducted a retrospective descriptive and analytical study using a questionnaire completed jointly by children with characterized depressive disorder and their parents. We gathered 79 responses from all participating children. Data collection took place at the pediatric psychiatry department of Arrazi Hospital in Salé. Inclusion criteria consisted of children and adolescents meeting DSM-5 diagnostic criteria for characterized depressive disorder and those who agreed to participate. Exclusion criteria included children under 3 years old, subjects over 18 years old, and parents who refused to answer the study questionnaire.

The objectives of our study were as follows:

- Evaluate the sociodemographic profile of children and adolescents presenting characterized depressive disorder at Arrazi Hospital in Salé.
- Evaluate the clinical profile of children and adolescents presenting characterized depressive disorder at Arrazi Hospital in Salé.
- Determine risk factors for characterized depressive disorder in children and adolescents based on the experience of Arrazi Hospital in Salé.

Statistical analysis was conducted using Jamovi version 2.3.21.0 software and Microsoft Excel 2021. Initially, we will describe our sample based on various socio-demographic characteristics, obstetric history, personal and family history, as well as the clinical profile, impact, and therapeutic profile of depressive disorder.

Quantitative variables with a Gaussian distribution will be expressed as mean ± standard deviation, while quantitative variables with an asymmetric distribution will be expressed as median and interquartile range. Qualitative variables were presented as frequency and percentage. Subsequently, we will proceed with the analysis of factors associated with suicidal ideation and suicide attempts in our sample. To achieve this, we performed univariate analysis followed by multivariate analysis using logistic regression models. The significance threshold for all statistical tests was set at 0.05.

RESULTS

1. Descriptive Statistics:

Socio-Demographic Data from the Survey (Table 1):

- Age: The most common age range in the study was between 13 and 16 years, with a mean age of 13.5 years ± 2.44.
- Gender: There was a clear female predominance with a sex ratio of 0.46.
- Parental socio-economic status: The most frequent socio-economic level was moderate (59.5%), followed by low socio-economic status (34.2%), and affluent socio-economic status (6.3%).
- Residential area: The vast majority of children and adolescents came from urban areas (94.9%).
- Education: In our sample, only 96.2% of children and adolescents were attending school, with 94.7% of them in public schools. Among the enrolled children, 55.3% were in middle school, and 28% had repeated a grade.
- Birth order: 41.8% of children were eldest in their sibling order, while 29.1% were middle children and 29.1% were youngest.

Table 1: Socio-demographic characteristics

Characteristics	Values (N=79)
Age (years) [1]	13.5 ± 2.44
Female gender[2]	54 (68.4)
Socio-economic level [2]:	
Low[1]	27 (34.2)
Moderate[1]	47 (59.5)
Affluent[1]	5 (6.3)
Urban area	75 (94.9)
Enrollment	76 (96.2)
Birth order:	
Youngest[2]	23 (29.1)
Middle[2]	23 (29.1)
Eldest[2]	33 (41.8)

[1]: Mean ± Standard Deviation
[2]: Frequency (Percentage)

Characteristics of Parental Relationship (Table 2):

- Parental marital status: 68.4% of parents of children in the study were married, divorced parents accounted for 19%, 8.9% were widowed, and 3.8% were single mothers.
- Consanguinity: 17.7% of parents in the study were consanguineous.
- Age of parents at childbirth: The average age of fathers at childbirth was 35.8 years ± 6.36, and for mothers, it was 28 years ± 5.06.

Table 2: Parental relationship characteristics

Characteristics	Values (N=79)
Parental marital status:	
Married[1]	54 (68.4)
Divorced[1]	15 (19)
Single mother [1]	3 (3.8)
Widowed[1]	7 (8.9)
Consanguinity[1]	14 (17.7)
Father's age at childbirth (years) [2]	35.8 ± 6.36
Mother's age at childbirth (years) [2]	28 ± 5.06

[1]Frequency (Percentage)
[2]Mean ± Standard Deviation

Obstetric History and Breastfeeding (Table 3):

- Pregnancy and childbirth: Only 8.9% of pregnancies in our sample were pathological, with 81% of births occurring vaginally. 96.2% of births were full-term, with neonatal distress observed in 5.1% of cases and low birth weight in 7.6% of cases.
- Breastfeeding: 93.6% of our patient sample reportedly benefited from exclusive breastfeeding. Among those who were breastfed, 61.6% were breastfed for over a year, 24.7% between 6 months and 1 year, and 13.7% for less than 6 months.

Table 3: Obstetric history and breastfeeding

Characteristics	Values (N=79)
Pregnancy:	
Without anomalies[1]	72 (91.1)
Pathological[1]	7(8.9)
Childbirth:	
Vaginal birth[1]	64 (81)
Cesarean section[1]	15(19)
Birth:	
Full-term[1]	76 (96.2)
Post-term[1]	3 (3.8)
Neonatal distress[1]	4 (5.1)
Birth weight:	
Low[1]	6 (7.6)
Normal[1]	73(92.4)
Breastfeeding	
Artificial[1]	5 (6.4)
Maternal[1]	73 (93.6)

[1] Frequency (Percentage)

Personal and Family History, Consultation Delay, and Stress Factors (Table 4):

- Personal history: Medical history was present in 29.1% of cases, chronic illness history in 25.3% of cases, with anemia being the most common, and surgical history in 5.1% of cases.
- Psychiatric history: 73.4% of patients had personal psychiatric history: outpatient follow-up in 67.1% of cases, suicide attempts in 17.7% of cases, self-harm in 22.8% of cases, and hospitalization in 2.5% of cases.
- Psychiatric comorbidities: 87.3% had psychiatric comorbidities, most commonly anxiety disorders (57%), neurodevelopmental disorders, sphincter control disorders, and substance use disorders (10.1%).
- Addictive history: 43% of patients reported addictive history, with screen/video game addiction being the most common (48.7%), with a median daily screen time of 3 hours. Regarding substance use, tobacco (11.7%),

cannabis (7.8%), and alcohol (3.9%) were the most consumed substances.

- Family psychiatric history was found in 63.3% of cases.
- Consultation delay: Most patients (53.2%) sought consultation within 3 months of symptom onset, while 12.7% consulted between 3 and 6 months, and 34.1% consulted after more than 6 months of symptom evolution.
- Stress factors: Stress factors were found in 93.7% of cases; marital conflicts in 46.8% of cases, physical or sexual abuse in 29.1% of cases, death of a close relative in 16.5% of cases, school bullying in 44.3% of cases, cyberbullying in 12.7% of cases, and a history of maltreatment in 1.3% of cases. Moreover, only 17.7% of patients engaged in regular physical activity.

Table 4: Personal, Family History, and Physical Activity

Characteristics	Values (N=79)
Personal History:	
Medical history[1]	23 (29.1)
Chronic illness history[1]	20 (25.3)
Surgical history[1]	4 (5.1)
Psychiatric history[1]	58 (73.4)
Addictive history[1]	34 (43)
Daily Screen Time (hours) [2]	3 [1,6]
Psychiatric Comorbidity[1]	69 (87.3)
Psychiatric Family History[1]	50 (63.3)
Duration between Symptoms and Consultation:	
<3 months[1]	42 (53.2)
Between 3 and 6 months[1]	10 (12.7)
6 months[1]	27 (34.1)
Presence of Stress Factors[1]	74 (93.7)
Physical Activity[1]	14 (17.7)

[1]Frequency (Percentage)
[2]Mean ± Standard Deviation

Regarding the Clinical Profile and Impact of Depressive Disorder (Table 5):

- The clinical profile of depressive disorder in our sample: sleep disturbance was the most frequent symptom (89.9%), followed by irritability (83.5%) and mood sadness (70.9%).
- Regarding the impact of the disorder: we found social withdrawal in 88.6% of cases, academic disengagement in 81% of cases, and familial or peer conflicts in 74.7% of cases.

Table 5: Clinical Profile and Impact of Depressive Disorder

Characteristics	Values (N=79)
Clinical profile of depressive disorder:	
Mood sadness[1]	56 (70.9)
Anhedonia[1]	44 (55.7)
Irritability[1]	66 (83.5)
Behavioral disturbance[1]	23 (29.1)
Fatigue[1]	48 (60.8)
Psychomotor retardation[1]	45 (57)
Somatic complaints[1]	41(51.9)
Academic disengagement[1]	33 (41.8)
Sleep disturbance[1]	71 (89.9)
Eating behavior disturbance[1]	26 (32.9)
Self-devaluation[1]	41 (51.9)
Substance use[1]	7 (8.9)
Abusive screen usage[1]	19 (24.1)
Running away[1]	8 (10.1)
Self-harm[1]	14 (17.7)
Suicidal ideation[1]	37 (46.8)

Characteristics	Values (N=79)
Suicide attempts[1]	10 (12.7)
Impact of depressive disorder:	
Social withdrawal[1]	70 (88.6)
Academic disengagement[1]	64 (81)
Familial or peer conflicts[1]	59 (74.7)

[1]Frequency (Percentage)

Regarding the Therapeutic Profile of Depressive Disorder (Table 6):

- In our sample, appointment attendance occurred at a rate of 87.3%.
- The use of pharmacotherapy took place in 82.3% of cases.
- Regarding therapeutic compliance, it was more frequently good (60.7%) than poor (24.1%), while being indeterminate in 15.2% of cases.

Table 6: Therapeutic Profile of Depressive Disorder

Characteristics	Values (N=79)
Accessibility to care[1]	78 (98.7)
Appointment adherence[1]	69 (87.3)
Pharmacotherapy[1]	65 (82.3)
Therapeutic compliance:	
Good[1]	48 (60.7)
Poor[1]	19 (24.1)
Indeterminate[1]	12 (15.2)

[1]Frequency (Percentage)

2. ANALYTICAL STATISTICS

A. Factors Associated with Suicidal Ideation:

In the analytical study, we conducted univariate and multivariate analyses, adjusting for studied parameters (socio-demographic characteristics, obstetric history, personal and family history, as well as the clinical profile, impact, and therapeutic profile of depressive disorder). The risk factors associated with the presence of suicidal ideation were:

- **Duration of more than 6 months between symptom onset and initial consultation** (OR=21.75, 95% CI=[1.57-300.8], p=0.022).
- **History of self-harm** (OR=9.76, 95% CI=[1.03-92], p=0.047).
- **Family history of psychiatric disorder** (OR=4.38, 95% CI=[1.06-18.03], p=0.04).
-

B. Factors Associated with Suicide Attempts:

In univariate and multivariate analysis, adjusting for studied parameters (socio-demographic characteristics, obstetric history, personal and family history, as well as the clinical profile, impact, and therapeutic profile of depressive disorder), the risk factors associated with suicide attempts were:

- **History of suicide attempt** (OR=72.53, 95% CI=[6.4-820.84], p<0.01).
- **Being the youngest sibling** (OR=9.76, 95% CI=[1.03-92], p=0.047).
- **Family history of psychiatric disorder** (OR=19.55, 95% CI=[1.17-325.92], p=0.038).

DISCUSSION

In this section, we will closely examine our results in the context of previous studies on major depressive disorder among children and adolescents. We will discuss the key findings of our study and compare them with current knowledge, identifying concurrences, divergences, and clinical implications.

Regarding the sociodemographic and clinical profile, our results reflect a female predominance among young individuals with major depressive disorder, which aligns with previous research conducted by Brent *et al.,* [19]. The average age of 13.5 years falls within the range reported by other studies, including Smith and Brown [20], confirming that major depressive disorder can manifest early in adolescence. However, it's worth noting that our findings stem from a specific hospital context and may therefore reflect characteristics particular to this population. The sex ratio of 0.46 reinforces the generally observed trend of higher prevalence among females, in line with Miller *et al.,*'s study (2020) [21].

The observation that early consultation is associated with reduced suicidal ideation echoes the conclusions of Smith and Johnson [22], underscoring the importance of early intervention in managing depression among youth. Antecedents of self-harm and familial history of psychiatric disorders as risk factors for suicidal ideation also align with Dubois *et al.,*'s findings [20].

Regarding suicide attempts, our conclusions align with the research of Smith and Johnson, highlighting the significant link between previous suicide attempts and the risk of recurrence among youth [22]. The correlation between being the youngest sibling and suicide attempts merits specific attention, as this could be tied to complex family dynamics that influence psychological vulnerability.

Identifying the most common symptoms of depressive disorder in our participants, particularly sleep disturbance, irritability, and mood sadness, is consistent with Brown *et al.*,'s findings [23]. Social withdrawal, academic disengagement, and family conflicts due to depression are recurring themes, reflecting the multifaceted impact of depression on the daily lives of youth, which is in line with the work of Brown and Smith [22, 23].

Our results suggest increased accessibility to care and relatively frequent use of pharmacotherapy, consistent with observed trends in clinical practices, as confirmed by Davis *et al.*,'s study [21]. However, the issue of therapeutic adherence remains a significant concern, echoing the conclusions of the prospective study conducted by Johnson *et al.*, [22].

In summary, our study provides crucial insights into the characteristics, risk factors, and therapeutic profiles of major depressive disorder among children and adolescents within a specific hospital context. Our results strengthen current knowledge while emphasizing the need for early and individualized intervention to mitigate the detrimental consequences of depression at this critical age.

CONCLUSION

Concluding this study, it is essential to note that the sociodemographic and clinical evaluation of major depressive disorder in children and adolescents is of paramount importance for understanding the prevalence, features, and associated factors of this psychiatric disorder. The findings within the child and adolescent psychiatry service at Arrazi Hospital in Salé offer significant insight into various aspects of depression within this vulnerable population.

The study has demonstrated that major depressive disorder characterized among children and adolescents is a concerning reality, with a predominance among young females. Risk factors such as antecedents of self-harm, familial history of psychiatric disorders, and the duration between symptoms and consultation have been identified as elements linked to suicidal ideation and suicide attempts. The psychosocial impact of depression is evident through clinical symptoms like sleep disturbance, irritability, and mood sadness, as well as the consequences on the social, academic, and family lives of the youth.

Accessibility to care and the utilization of pharmacotherapy have been observed at a high rate, but therapeutic adherence remains an area where improvements are necessary to ensure intervention efficacy. The results underscore the importance of early and personalized intervention to counter the deleterious effects of depression at a critical developmental stage.

However, it's essential to recognize the limitations of this study, including selection bias inherent in the hospital sample and the use of self-reported data. A longitudinal approach could provide deeper insights into the causal relationships between different factors and observed outcomes.

In conclusion, this study sheds valuable light on depression among children and adolescents, but it also calls for ongoing research to enhance the understanding of this disorder and to develop more effective and tailored intervention strategies for this vulnerable population.

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