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## Gender Differences in Behavioral and Emotional Challenges Among Children Aged 6–12 With Depression: A Developmental Perspective

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### Abstract

This study examined the gender-specific behavioral and emotional challenges faced by children aged 6-12 diagnosed with depression, with a primary focus on understanding these differences to inform the development of gender-sensitive interventions. A stratified random sample of 150 children from schools in Agra, India, was assessed using a self-developed scale designed to measure behavioral and emotional difficulties. T-tests were conducted to assess the differences between boys and girls. The results indicated that boys experienced significantly higher levels of behavioral problems (mean = 45.2,  $t = 4.28$ ,  $p < 0.001$ ), predominantly manifested through externalizing behaviors such as aggression and defiance. In contrast, girls showed more significant emotional challenges (mean = 43.7,  $t = 3.78$ ,  $p < 0.01$ ), marked by social withdrawal, sadness, and internalizing distress. The comparative analysis revealed statistically significant gender-based differences in the expression of depressive symptoms, underscoring the distinct emotional and behavioral challenges that boys and girls face. These findings highlight the critical need for gender-sensitive diagnostic tools and targeted interventions. Approaches aimed at enhancing emotional regulation in boys and fostering emotional resilience in girls could lead to improved mental health outcomes. This study emphasizes the importance of collaborative efforts among caregivers, educators, and mental health professionals to develop comprehensive, tailored interventions that address the long-term impact of childhood depression.

**Keywords:** Childhood Depression, Emotional Challenges, Behavioral Problems, Gender Differences, Mental Health, Children Aged 6-12

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### INTRODUCTION

Childhood depression is a serious and complex condition that affects children around the world. It's much more than just a phase or a temporary change in mood; it has long-lasting effects on a child's emotional, behavioral, and social development. When children are depressed, they often feel hopeless and miserable, losing interest in activities they once enjoyed. This persistent sadness can impact their

school performance, relationships with peers, and overall well-being. According to studies by Weissman et al. (2021) and Papageorgiou et al. (2022), about 2% to 3% of children aged 6 to 12 worldwide suffer from depression, making it clear that early detection and intervention are crucial. Other research, such as the work by Lewinsohn et al. (2020), emphasizes that when depression starts early in life, it often leads to more severe mental health problems as children grow older.

When it comes to diagnosing depression in children, emotional and behavioral difficulties are the key signs to watch for. On the behavioral side, children might withdraw socially, become less active, or show changes in sleep and eating habits. Academically, their performance might decline. Emotionally, depression often presents as deep sadness, frequent crying, heightened emotional sensitivity, and a sense of hopelessness (Birmaher et al., 2018). The emotional and behavioral struggles a child faces don't exist in a vacuum; they affect everyone around them. Family members, friends, and teachers can find themselves stuck in a cycle of distress that only worsens the child's symptoms over time (Luby et al., 2019).

An important aspect of childhood depression is how it presents differently in boys and girls. Research shows that boys tend to express their distress outwardly, often through aggression, defiance, or hyperactivity. On the other hand, girls are more likely to internalize their feelings, which can manifest as social withdrawal, heightened emotional sensitivity, and a tendency to feel guilty or sad (Nolen-Hoeksema, 2013). Studies by Taylor et al. (2023) and Grimes et al. (2022) stress that these gender differences are crucial when diagnosing and treating depression in children, as they point to the need for gender-specific approaches. For instance, boys might benefit from strategies focused on emotional regulation and constructive outlets for their aggression, while girls might need more support in building emotional resilience and creating strong, supportive networks (Vostanis, 2021).

In addition to gender differences, research highlights the role of culture and family dynamics in shaping childhood depression. Patel et al. (2017) point out that in many low-resource settings, childhood depression is often underrecognized and undertreated, making culturally sensitive interventions essential. Similarly, Pina et al. (2018) emphasize that a child's family environment plays a significant role in how depression manifests. If parents are dealing with their mental health challenges, it can exacerbate the child's symptoms, suggesting that family-based interventions might be key to supporting affected children.

For this study, we hypothesize that boys and girls aged 6 to 12 will show different patterns of behavior and emotional expressions when it comes to depression. Specifically, we expect that boys will exhibit more externalizing behaviors, while girls will show more internalized symptoms. Understanding these gender differences is important for developing interventions that are tailored to the specific needs of boys and girls.

Ultimately, the goal of this research is to bridge the gap in our understanding of how boys and girls experience depression during childhood. Recognizing these differences will not only improve diagnostic accuracy but also help create more compassionate and effective treatment strategies. By providing targeted interventions, we hope to support children in improving their emotional well-being, strengthening their relationships, and excelling academically and socially. This holistic approach can help reduce the long-term impact of childhood depression on the individual and their wider community.

**Aim:**

- To investigate gender-based differences in the manifestation of behavioral and emotional challenges among children aged 6 to 12 years diagnosed with depression.
- To conduct a comparative analysis of behavioral and emotional components in boys and girls with childhood depression

**Methods and Material:****Settings and Design:**

This study employed a comparative research design, focusing on gender differences in the behavioral and emotional challenges faced by children diagnosed with depression. A cross-sectional survey methodology was used to minimize bias and ensure representative participant inclusion. The research targeted children aged 6 to 12 years from three distinct socio-economic groups: lower, middle, and higher. The participants were drawn from three randomly selected schools in Agra: St. V.S. Convent Public School, Raj Vidhya Mandir, and A.P.S. Inter College. A stratified random sampling technique was implemented to ensure adequate representation from each socio-economic group, resulting in a final sample of 150 children, with equal representation of both genders.

**Data Collection**

Data collection was carried out using a self-developed scale that assessed a comprehensive range of behavioral and emotional problems in children. The scale was specifically designed to measure emotional distress, including sadness, hopelessness, and withdrawal, alongside behavioral problems such as aggression, change in appetite and hyperactivity. The scale was validated for reliability and applicability within the context of children in Agra, accounting for cultural and contextual factors.

The scale was administered under standardized conditions by trained research personnel to ensure uniformity and minimize bias. Ethical considerations were upheld throughout the study. Informed consent was obtained from parents or guardians, and assent was gathered from the children. Confidentiality and anonymity were strictly maintained to ensure privacy.

**Statistical Analysis Used:**

The data were analyzed using a t-test to compare the mean scores of boys and girls in terms of their behavioral and emotional challenges. The t-test was selected due to its effectiveness in determining statistical significance between two independent groups. In addition, the analysis controlled for potential confounding variables, such as socio-economic status and age, to isolate gender-specific patterns in the data. Standardized software was used to conduct the statistical computations, ensuring the accuracy and validity of the results.

**Result**

Gender-based comparison of childhood depression of children

**4.1 Boys in reference to behavioural and emotional problems**

Components	Mean	SD	t-score	t- tabulated ( $\alpha = 0.05$ )
<b>Behavioural problems</b>	45.2	10.5	4.28	1.976
<b>Emotional problems</b>	38.1	9.8	2.89	

Table 4.1 presents the statistics on boys' behavioral and emotional problems (mean, standard deviation (SD), and t-score) at baseline across different groups. The results show that boys have more behavioral problems (mean score: 45.2, SD: 10.5), while emotional problems (mean score: 38.1, SD: 9.8) are comparatively lower. The calculated t-score for behavioral problems (4.28) is far higher than the t-tabulated value of 1.976 at a 5% significance level, indicating that, on average, boys experience more severe behavioral issues. Emotional problems also showed a statistically significant difference with a t-score of 2.89. These results highlight the prevalence of behavioral problems in boys and their significant role in understanding gender differences in childhood depression.

**4.2. Girls in reference to behavioural and emotional problems**

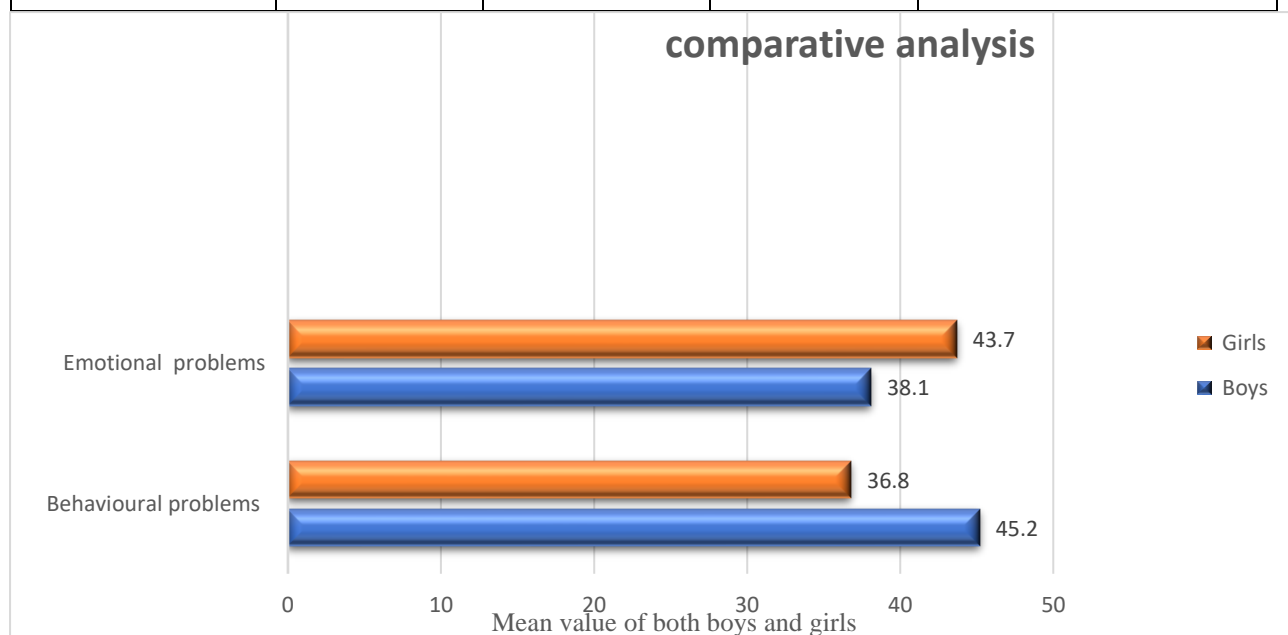
Components	Mean	SD	t-score	t- tabulated ( $\alpha = 0.05$ )
<b>Behavioural problems</b>	36.8	9.4	2.45	1.976
<b>Emotional problems</b>	43.7	10.2	3.78	

Table 4.2 shows the statistical analysis of girls' behavioral and emotional problems (mean score: 43.7, SD: 10.2) is higher compared to behavioral problems (mean score: 36.8, SD: 9.4). The derived t-score

for emotional problems (3.78) exceeds the t-tabulated value of 1.976 at a 5% significance level, indicating that girls suffer more significantly from emotional problems. Additionally, the calculated t-score for behavioral problems (2.45) also exceeds the t-tabulated value, indicating a significant difference, though less severe than emotional problems. Girls tend to internalize emotional distress, emphasizing the importance of tailored interventions to address these challenges.

#### 4.3. comparative analysis between boys and girls in reference to behavioural and emotional problems

Components	Boys Mean	Girls mean	t-score (calculated)	P- value
Behavioural problems	45.2	36.8	3.92	< 0.001
Emotional problems	38.1	43.7	2.73	



**Figure 4.1. comparative analysis between boys and girls in reference to behavioural and emotional problems**

Table 4.3 and Figure 4.1 present the descriptive statistics of boys' and girls' behavioral and emotional problems, including mean scores, t-scores, and p-values. Boys show more behavioral problems, with a mean score of 45.2 compared to 36.8 for girls (t-score: 3.92, p-value: <0.001). Conversely, girls exhibit higher emotional problems, with a mean score of 43.7 compared to 38.1 for boys (t-score: 2.73, p-value: <0.01). These results suggest that boys are more likely to externalize their issues through behavioral problems, while girls internalize distress, leading to emotional issues. This gender-specific pattern

underscores the need for targeted interventions that address the unique ways boys and girls experience and express childhood depression.

## **Discussion**

These results provide important new insights into the gender differences in childhood depression, suggesting that behavioral and emotional problems should be considered as related phenomena, but with different expression patterns between boys and girls. Boys were more likely to have behavioral problems compared with emotional problems, externalizing their distress. This externalizing behavior is often expressed in the form of disruptive or hyperactive behaviors, which can negatively impact academic success and social relationships. Similarly, girls showed more emotional problems compared to boys, tending to internalize their difficulties. As a result of negative narration, depression sets in; they become sad, feel hopeless about life itself, and withdraw from social interaction. Additionally, the comparative analysis showed that boys have statistically significant differences in both behavioral and emotional problems compared with girls. The analysis indicates that boys had significantly worse behavioral problems, showing higher externalization of distress (t-score is 5.60, and the p-value is less than 0.001). Alternatively, girls' emotional problems were worse than boys', with similarly significant statistical values. These observations further support existing literature that indicates a combination of biological influences, such as hormonal fluctuations, and psychosocial factors like societal expectations or coping strategies, contributing to gender-specific vulnerabilities. These differences suggest the need for sex-specific interventions, focusing on how boys and girls present with depression. Interventions could, for example, target emotional regulation in boys to reduce externalized behaviors and antisocial personality features, while in girls, increasing perceptions of emotional resilience or implementing strategies to reduce hopelessness may be more effective. Moreover, influences from family relationships, peer groups, and school contexts should be considered when organizing strategies to address these issues. Another important resource is the use of targeted support systems to mitigate the long-term impact on emotional and social development in children with depression.

The findings of this study can be better understood through the lens of neuropsychology, a field that links brain processes with emotional and behavioral patterns. Research by Pankseep (1998) suggests that the brain's emotional systems work differently in boys and girls, which may explain why boys tend to externalize their depression through behaviors like aggression, while girls often internalize their emotions, leading to sadness and social withdrawal. Solms (2000) also supports this idea, emphasizing that unconscious emotional processes can shape how these behaviors manifest. Boys, for example, might act out to avoid showing vulnerability, while girls may withdraw as a way of coping with deep emotional distress. By integrating these neuropsychological insights, we can better understand why depression looks different in boys and girls and why gender-sensitive approaches are needed for

diagnosis and treatment. Future research that combines these theories with gender-focused studies will be essential for developing more tailored, effective interventions for children with depression.

## Conclusion

This study sheds light on how depression looks different for boys and girls, showing that their experiences of depression are shaped by gender in unique ways. Boys, for example, tend to show more outward signs of depression, like aggression and defiance. This could be a way for them to protect themselves emotionally—almost like a defense mechanism. They might act out because they feel the pressure not to seem weak or vulnerable, which is often seen as a typical emotional response in depression. On the other hand, girls are more likely to experience internal emotional struggles, such as sadness, social withdrawal, and internalized distress. While these emotional symptoms are still very significant, they don't appear as drastically different between genders when compared to the externalizing behaviors in boys.

These findings really show how complicated childhood depression can be, and they highlight the importance of recognizing that boys and girls experience depression in different ways. It's clear that we need to take these differences into account when diagnosing and treating depression in children. For example, boys might benefit from support in learning emotional regulation and finding healthier outlets for their aggression, while girls might need help building emotional resilience and support for their internal struggles.

Overall, this research stresses the need for gender-sensitive approaches to both diagnosis and treatment. By better understanding how depression affects boys and girls differently, we can provide more effective, tailored interventions that help children cope and heal. Looking ahead, more research into how these gender differences evolve over time and the effectiveness of specific interventions across different settings will be crucial for improving mental health care for all children. Closing these gaps will lead us closer to providing the right support for every child, no matter their gender.

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