

## ANXIETY, FEAR AND BEHAVIOUR: DOES HAVING SIBLINGS MAKE A DIFFERENCE?

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### Abstract

**Background:** Sibling relationships are widely regarded as the most enduring human connection. Only limited studies in India emphasize the influence of siblings on behaviour of children. This study tries to fill the gap in understanding how family structure impacts the psychological well-being of children. Primary objective is to compare anxiety, fear, emotional and behavioural problems between only children and children with siblings. Secondary objective is to assess the impact of siblings on the behaviour of children on characteristics of anxiety and fear. **Materials and Methods:** Study Design is an analytical cross-sectional study. The study setting is OPD - Thanjavur Medical College Hospital. Participants are Parents of children aged from 7 to 15 years. Interventions and outcomes standard assessment tools like the Spence Children Anxiety Scale, Strengths and Difficulties Questionnaire and Revised Fear Survey Scale for Children for anxiety, fear, behavioural and emotional issues in children, respectively, were used. These questionnaires are scored using respective scoring systems for the collected data. The main outcome measures the anxiety, fear and behaviour problems between only children and children with siblings. Statistical analysis is Unpaired 't' test was used to compare the means between the groups. Fisher's exact test was used to compare the proportions between the two groups. Mann Whitney U test was used to compare the median between the groups.  $p < 0.05$  was considered statistically significant. **Result:** The research's findings revealed that conduct problems were more prevalent among children with siblings than single children. However, no significant differences were observed between the two groups in terms of anxiety, fear, and other domains of emotional and behavioural problems. **Conclusion:** Conduct problems are significantly more prevalent in children with siblings compared to only children, highlighting the need for specific behavioural interventions for families with multiple children.

## INTRODUCTION

"Children are not things to be moulded, but are people to be unfolded." This quote by Jess Lair encapsulates the essence of understanding the complexities of child development. Anxiety, fear, emotional and behavioural problems are significant issues that affect many children worldwide, impacting their overall well-being and future potential. While numerous studies have explored these psychological challenges, the role of family structure specifically, being an only child versus having siblings remains a critical area for further analysis.

The psychological health of children is profoundly influenced by their familial environment. Research has depicted that family dynamics play a vital role in shaping children's emotional as well as behavioural responses. For instance, children with siblings often benefit from social interactions and support, which can serve as a buffer against stress and anxiety.<sup>[1]</sup> On the other hand, only children may experience heightened levels of anxiety and fear due to the absence of sibling companionship and rivalry.<sup>[2]</sup> However, despite having the world's largest population, there is very scarce research evidence regarding siblings and their impact on children in India.

A study by Roberts and Blanton,<sup>[3]</sup> suggested that only children might be at a greater risk of developing certain behavioural as well as emotional problems. However, other researchers, such as Newman,<sup>[4]</sup> have argued that only children can exhibit similar psychological profiles to those with siblings, challenging the notion of inherent disadvantages.

Given these conflicting perspectives, this research aims to perform a comprehensive comparative analysis of anxiety, fear, emotional and behavioural problems among only children as well as children with siblings. Specifically, this research will address the following questions: Are only children more prone to anxiety and fear compared to their peers with siblings? Do emotional and behavioural problems significantly differ between these two groups? Does having siblings make any difference?<sup>[5-7]</sup>

Gaining a comprehensive understanding of these distinctions is essential for the growth of specific interventions along with support systems for children who are encountering psychological difficulties. This study hopes to contribute to the broader discourse on child psychology and inform better practices for parents, educators and mental health professionals.<sup>[8]</sup>

## MATERIALS AND METHODS

This study was conducted at Thanjavur Medical College in Thanjavur from January 2023 to May 2024. Parents of 100 children aged between 7 and 15 years who consented to participate in the study were recruited. Children with known cognitive or behavioural problems and children of single parents or broken families were excluded. According to Saloni Arora et al [5], considering an estimated mean difference ( $\mu_1 - \mu_2$ ) between behaviour an only child and in child with siblings as 12.4, and an average standard deviation ( $\sigma$ ) of 22, at 95% confidence interval ( $Z_{1-\alpha/2} = 1.96$ ), with 80% power ( $Z_{1-\beta} = 0.84$ ), the sample size was calculated as 100, 50 from each group. The research received approval from the Institutional Ethical Committee. The participants were informed about the study and written consent was obtained.

Three validated questionnaires were used. Spence Children Anxiety Scale (SCAS), Strengths and Difficulties Questionnaire (SDQ), Revised Fear Survey Schedule for Children (FSSC – R).

The SCAS [6] is a commonly employed self-report survey specifically developed to analyse the symptoms of anxiety in children and adolescents on various dimensions involving generalized anxiety, separation anxiety, social phobia, OCD, panic disorder, agoraphobia and physical injury fears. It consists of 44 items, each rated on a 4-point scale ranging from "Never" to "Always.". The SDQ [7] is a concise survey designed to evaluate emotional and behavioural patterns in children and adolescents with higher validity and reliability. The SDQ

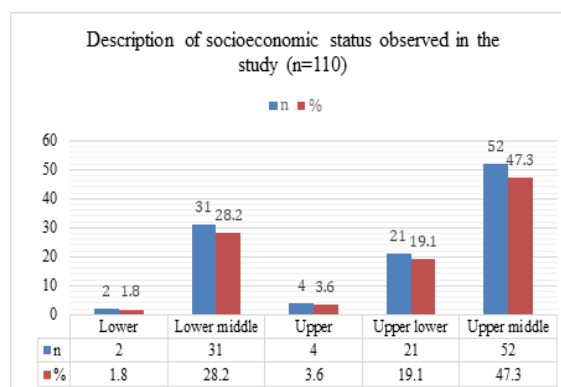
comprises five key domains: conduct problems, emotional symptoms, peer relationship problems, hyperactivity/inattention, and prosocial behaviour. It has 25 items, with each item rated on a 3-point scale: "Not True," "Somewhat True," or "Certainly True." The FSSC-R [8] is a comprehensive self-report questionnaire designed to assess the nature as well as intensity of "fears in children and adolescents. It includes 80 items that cover a broad range of common childhood fears, such as dark fears, animals, medical procedures, and social situations. Each item is rated on a 3-point scale": "None," "Some," or "A lot," reflecting the frequency and severity of the child's fears.

As mentioned above, the final scores of the questionnaires were generated by employing the respective scoring systems for the collected data.

**Statistical analysis:** Data were entered in the excel spreadsheet and variables were coded accordingly. The statistical analyses were performed using SPSS version 20 trial software. Data were presented as mean with standard deviation for normal distribution/scale data. Data were presented as frequency with proportion n (%) for categorical data. Unpaired 't' test was used to compare the means between the groups. Fisher's exact test was used to compare the proportions between the two groups. Mann Whitney U test was used to compare the median between the groups.  $p < 0.05$  was considered statistically significant.

## RESULTS

The research involved a total of 110 subjects, with a near-equal distribution of females (57, 51.8%) and males (53, 48.2%). The subjects were categorized into two groups: single children (53, 48.2%) and children with siblings (57, 51.8%). The siblings statuses are listed in [Table 1]. [Figure 1] depicts the socioeconomic status observed in the study.



**Figure 1: Description of socioeconomic status observed in the study**

The data analysis included comparisons of anxiety, fear and behavioural problems among single children and children with siblings using various scales (SCAS, SDQ, FSSC-R). Statistical significance was set at  $p < 0.05$ .

[Table 2] compares the various components of Spence's "children's anxiety scale – for OCD, Social phobia, panic agoraphobia, Physical injury fears, anxiety" of separation, generalized anxiety, and total SCAS Scores and percentile showed no significant differences ( $p>0.05$  for all subgroups) between single children and children with siblings. T- Score category was elevated for only one participant ( $>60$ ,  $n=1$ , 0.9%), a single child.

[Table 3] shows the comparison of median values of SDQ score. Conduct problems approached significance, with children with siblings showing

higher values ( $p = 0.037$ ). Hyperactivity, Emotional problems, prosocial behaviour, peer problems, and total SDQ scores also depicted no significant variations among the 2 groups ( $p>0.05$ ).

Comparison of various components of the FSSC scale is given in [Table 4]. No significant differences were found across various categories of fear like failure and criticism, the unknown, danger and death, minor injury, miscellaneous fears, medical fears, total score intensity and total score frequency between single children and children with siblings ( $p>0.05$  for all).

**Table 1: Description of the number of siblings category observed in the study (n=110).**

| S.No | Number of siblings | N  | %    |
|------|--------------------|----|------|
| 1    | Nil                | 53 | 48.2 |
| 2    | One sibling        | 47 | 42.7 |
| 3    | Two siblings       | 9  | 8.2  |
| 4    | Three siblings     | 1  | 0.9  |

**Table 2: Comparison of various components of SCAS score between single child and child with siblings groups observed in the study.**

| S.No | Parameter             | Single child |      |      | With siblings |      |      | t value | df  | p value    |
|------|-----------------------|--------------|------|------|---------------|------|------|---------|-----|------------|
|      |                       | n            | Mean | SD   | n             | Mean | SD   |         |     |            |
| 1    | SAS-OCD               | 53           | 1.2  | 2.3  | 57            | 0.9  | 1.1  | 0.85    | 108 | 0.392 (NS) |
| 2    | Social phobia         | 53           | 2.0  | 2.8  | 57            | 2.3  | 2.2  | 0.46    | 108 | 0.643 (NS) |
| 3    | Panic agoraphobia     | 53           | 2.1  | 2.8  | 57            | 2.6  | 2.9  | 0.95    | 108 | 0.342 (NS) |
| 4    | Separation anxiety    | 53           | 2.1  | 2.8  | 57            | 2.4  | 2.4  | 0.58    | 108 | 0.56 (NS)  |
| 5    | physical injury fears | 53           | 1.7  | 2.2  | 57            | 2.2  | 2.5  | 1.13    | 108 | 0.257 (NS) |
| 6    | Generalized anxiety   | 53           | 2.0  | 4.0  | 57            | 1.6  | 2.3  | 0.63    | 108 | 0.527 (NS) |
| 7    | Total SCAS            | 53           | 10.9 | 14.0 | 57            | 11.8 | 10.5 | 0.39    | 108 | 0.696 (NS) |

Data are expressed as mean with SD. Unpaired t-test was used to compare the mean between the groups. NS = Not significant.

**Table 3: Comparison of median value of various components of SDQ score between single child and child with siblings groups observed in the study**

| Parameter                | Single child |        |           | Child with siblings |        |           | Mann Whitney U | p-value    |
|--------------------------|--------------|--------|-----------|---------------------|--------|-----------|----------------|------------|
|                          | n            | Median | IQR       | n                   | median | IQR       |                |            |
| Emotional problems scale | 53           | 0.0    | 0 - 2.5   | 57                  | 1.0    | 0 - 2     | 1341           | 0.284 (NS) |
| Conduct problems scale   | 53           | 1.0    | 0 - 2     | 57                  | 2.0    | 1 - 3.5   | 1168           | 0.037*     |
| Hyperactivity scale      | 53           | 3.0    | 0 - 5     | 57                  | 3.0    | 2 - 5     | 1396           | 0.488 (NS) |
| Peer problems scale      | 53           | 4.0    | 2 - 5     | 57                  | 4.0    | 2 - 4     | 1265           | 0.141 (NS) |
| Prosocial scale          | 53           | 8.0    | 4 - 10    | 57                  | 7.0    | 4 - 10    | 1292.5         | 0.192 (NS) |
| Total SDQ score          | 53           | 16.0   | 13 - 19.5 | 57                  | 16.0   | 13 - 19.5 | 1461.5         | 0.769 (NS) |

Data are expressed as median with IQR. Mann Whitney U test was used to compare the median between the groups. NS = Not significant.

**Table 4: Comparison of various components of fear scale between single child and child with siblings groups observed in the study**

| S.No | Parameter               | Single child |       |      | With siblings |       |      | t value | df  | p value    |
|------|-------------------------|--------------|-------|------|---------------|-------|------|---------|-----|------------|
|      |                         | n            | Mean  | SD   | n             | Mean  | SD   |         |     |            |
| 1    | Failure and criticism   | 53           | 33.0  | 9.1  | 57            | 33.5  | 9.5  | 0.25    | 108 | 0.798 (NS) |
| 2    | The unknown             | 53           | 28.1  | 9.2  | 57            | 29.0  | 10.0 | 0.5     | 108 | 0.614 (NS) |
| 3    | Minor injury            | 53           | 25.7  | 8.2  | 57            | 26.2  | 6.9  | 0.34    | 108 | 0.731 (NS) |
| 4    | Danger and death        | 53           | 20.5  | 7.7  | 57            | 21.2  | 8.5  | 0.51    | 108 | 0.609 (NS) |
| 5    | Medical fears           | 53           | 6.1   | 2.6  | 57            | 5.9   | 2.3  | 0.31    | 108 | 0.755 (NS) |
| 6    | Miscellaneous           | 53           | 6.8   | 1.3  | 57            | 7.5   | 2.1  | 1.94    | 108 | 0.053 (NS) |
| 7    | Total score - intensity | 53           | 119.7 | 33.1 | 57            | 123.3 | 35.2 | 0.55    | 108 | 0.579 (NS) |
| 8    | Total score - frequency | 53           | 11.6  | 13.5 | 57            | 12.0  | 10.7 | 0.16    | 108 | 0.871 (NS) |

Data are expressed as mean with SD. Unpaired t-test was used to compare the mean between the groups. NS = Not significant.

## DISCUSSION

This study outcome reflects that Conduct problems are more common in children with siblings. The study also examined socio-economic status as well as the structure of the family and it found no notable disparities between children and children with siblings in these domains. The SCAS outcomes depicted no significant differences in anxiety symptoms between single children and children with siblings. This finding aligns with previous research by Jiao, Ji, and Jing,<sup>[9]</sup> which concluded that only children do not exhibit greater levels of anxiety in comparison to children with siblings. Similarly, Falbo and Polit,<sup>[2]</sup> observed that only children do not differ significantly from their peers with siblings in terms of anxiety and other psychological problems. These studies support the notion that factors other than sibling status, such as parenting styles, play a more critical role in influencing anxiety levels than the presence or absence of siblings.

The SDQ results indicated conduct problems were higher in children with siblings. This could imply that sibling interactions might sometimes contribute to more conduct issues, potentially due to sibling rivalry or competition. This result is consistent with the findings of Brody and Stoneman,<sup>[10]</sup> who reported that sibling interactions might sometimes contribute to behavioural issues. However, the absence of significant differences in this study in other parameters suggests that the presence of siblings has no major impact on behaviour. This aligns with Daniels and Plomin's,<sup>[11]</sup> findings, who found no significant differences in behavioural issues between single children and children with siblings. Mancillas,<sup>[12]</sup> challenged the stereotypes about only children, indicating that only children are not significantly different from those with siblings in terms of social skills, personality, and academic achievement. Our study adds a nuanced perspective by identifying that children with siblings exhibit more conduct problems. This suggests that while only children and those with siblings are similar in many respects, sibling dynamics may contribute to increased conduct-related issues. These varied thoughts warrant further investigation with larger sample sizes to draw definitive conclusions. The FSSC-R results showed no significant differences in various fear types among the two groups. This finding supports the work of King, Gullone, and Ollendick,<sup>[13]</sup> who observed that fears in children are more closely related to individual experiences and personality traits rather than sibling status.

As noted by Sang SA, Nelson JA,<sup>[14]</sup> siblings play a significant role in developing social skills. However, our study added that these could include negative interactions like conduct problems. Yang et al,<sup>[15]</sup> provided valuable insights into the psychological effects of sibling status in a specific cultural context, showing that sibling presence does not significantly influence anxiety and depression levels but might

affect fearfulness. There are many studies,<sup>[16-19]</sup> that concluded no significant differences between these two groups. Our study corroborates these findings regarding anxiety and fear but adds that children with siblings exhibited more conduct problems, emphasizing the complexity of sibling dynamics in child development. Gass, Jenkins, and Dunn,<sup>[20]</sup> noted that sibling relationships can play a significant protective role in children's adjustment, particularly during stressful life events. These varying perspectives tell us that the long-term effects of sibling relationships and other family dynamics can vary greatly, highlighting the need for comprehensive, long-term research to understand these complex interactions fully.

This study's outcomes have major implications for comprehending the influence of sibling status on child development. The absence of significant differences in anxiety, fear, and behavioural problems between only children and children with siblings suggests that sibling status alone is not a critical determinant of these psychological attributes. Future research should focus on exploring other factors that may influence child development, such as parenting practices, peer relationships, and individual temperament. Furthermore, longitudinal studies could provide deeper insights into how these factors interact over time to shape psychological outcomes.

## CONCLUSION

This study found a significant impact of siblings on the conduct of children. The main strength of our study is that there are very few studies on sibling relationships and children's psychological attributes in India. However, sibling status alone does not significantly impact anxiety, fear, or other behavioural problems in children, contributing to the ongoing debate on sibling status and child development. By taking into account a wider array of factors that have an impact, scholars and professionals can create more efficient approaches to promote the mental health of every child, irrespective of their sibling status. Further studies with large populations and with several other factors influencing child development are required to draw a definitive conclusion.

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