

Research Paper

Exploring The Impact of Geographical Background and Sibling Status on Mental Health

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ABSTRACT

Numerous factors significantly affect mental health, including geographical background and sibling status. The purpose of the present study was to investigate the effects of geographical background and sibling status on the mental health of college students. For this purpose, the mental health of college students was measured using the Mental Health Inventory (MHI) developed by Dr. Jagdish and Dr. A.K. Shrivastav. The sample consisted of 100 subjects, and a 2x2 factorial design was used. There were two independent variables: the first being geographical background, with two levels (urban and rural), and the second being sibling status, also with two levels (single child and non-single child). For data analysis statistical techniques such as two-way ANOVA, Mean and Standard Deviation (S.D.) were applied. Based on the obtained data, it was concluded that sibling status has a significant impact on the mental health of college students, whereas geographical background does not have a significant impact.

Keywords: *Mental Health, Geographical Background, Urban- Rural, Sibling Status, College Students*

Mental health encompasses an individual's ability to confront life's challenges, develop self-awareness, engage in learning, and contribute effectively to society. It supports optimal physical, intellectual, and emotional development, in alignment with the well-being of others (Flugel, 1948). According to the World Health Organisation (2022), mental health is a state of well-being where individuals can manage stress, recognise their abilities, learn and work effectively, and make positive contributions to their communities.

India is currently grappling with a substantial prevalence of mental disorders. According to the *Mental State of India 2024* report, the overall mental health status in India was lower in 2023 compared to 2020, with a noticeable decline among youth aged 18-24 (Basu & Chandola, 2024). Approximately 15% of the Indian population experiences some form of mental health issues, including disorders such as anxiety, depression, bipolar disorder, schizophrenia, substance use disorders, and various neurodevelopmental conditions (*Cureus Journal, 2023*).

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In 2017, nearly 197.3 million people in India were reported to be struggling with mental health problems, accounting for 14.3% of the population (Dandona, 2020). The overall prevalence of common mental disorders, including depression and anxiety, was reported to be 5.2% in the 2016 National Mental Health Survey, with a treatment gap of 18.4% (*The Lancet*, 2024).

India is home to 356 million youths aged 10-24, making it the country with the world's highest population in this age group. However, the question remains: how many of these 356 million are living a mentally healthy life? *The National Mental Health Survey of India* estimates the current prevalence of mental disorders among those aged 18-29 years to be 7.39%, with a lifetime prevalence of 9.54%, among those aged 13-17 years, the prevalence is 7.3%. This age group also faces a high rate of self-harm, with suicide being the leading cause of death. Notably, approximately half of all mental health issues are known to begin by age 14 (Indian Journal of Medical Research, [IJMR], 2018).

Geographical Background and Mental Health

Historically, there has been significant interest in the effects of geographical background and sibling status on mental health, as reflected in psychological literature. Numerous studies have explored these topics, highlighting diverse mental health outcomes among individuals residing in rural areas compared to their urban counterparts.

Research indicates that the risk of major mental illnesses, such as anxiety, psychotic, mood, or addictive disorders, is generally higher in urban settings. For instance, anxiety disorders are reported to be more prevalent in cities than in rural regions in several Latin American and Asian countries. A Danish study found that individuals who spend their first 15 years in a major city had a higher risk of developing schizophrenia (*National Centre for Biotechnology Information [NCBI]*, 2017).

Several studies further suggest that urban living is associated with higher rates of various mental health issues compared to rural living. Specifically cities have been linked to a nearly 40% higher risk of depression, over 20% more anxiety, and twice the risk of schizophrenia. Additionally, urban environments contribute to increased feelings of loneliness, isolation, and stress (*Urban Development and Mental Health, [UDMH]*, 2024).

A 2024 study by Mishra titled "The Effects of Urbanisation on the Mental Health of Women" revealed that women in urban areas experience higher levels of anxiety, inferiority complexes, disturbed sleep, and common psychological symptoms such as phobias, feelings of homelessness, worthlessness, and guilt (Mishra, 2021).

Siblings Status and Mental Health

The number of siblings a child has can significantly impact their mental health. Research indicates notable differences in the mental well-being of children with siblings compared to those without. For example, a study conducted in China in 2020 assessed the impact of only-child status on the mental health of adolescents and concluded that non-only children were more likely to exhibit symptoms of anxiety and depression compared to only children (National Centre for Biotechnology Information [NCBI], 2020)

Another study conducted by students of GSVM Medical College focused on individuals without siblings, particularly those aged 17-19 years. The findings revealed that these students were more prone to experiencing psycho-social issues and psychological disorders

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such as aggressiveness, loneliness, and depression. According to this study, approximately 38% of single children faced psycho-social challenges, while 58% suffered from psychosomatic problems like depression.

Dr. R.P. Singh, the HoD at GSVM Medical College, highlighted that single children often encounter social behavioural issues due to the absence of sibling interactions. Lacking daily social engagement with siblings, these children may tend to be more solitary. Consequently, they are sometimes labelled as “spoiled” or “selfish” (Singh, 2011).

Objectives

The study was conducted with the following objectives:

1. To investigate the effects of geographical background on the mental health of college students.
2. To examine the effects of sibling status on the mental health of college students.
3. To elucidate the interaction effect between geographical background and sibling status on the mental health of college students.

Hypotheses

Based on the objectives of the study, the following hypotheses were formulated:

1. There will be significant effect of geographical background on the mental health of college students.
2. There will be a significant effect of sibling status on the mental health of college students.
3. There will be a significant interaction effect between geographical background and sibling status on the mental health of college students.

METHODOLOGY

Sample

The sample consisted of 100 college-going students aged 18-22 years, evenly divided into two groups: 50 students from urban settings and 50 students from rural areas. Each group was further subdivided into two equal parts, with 25 students identified as single children and 25 students having siblings. The sample was selected using a stratified random sampling method.

Tools Used

To assess the mental health of the selected participants, the *Mental Health Inventory* (MHI) was utilised, which comprises 56 items. The validity of this inventory was reported to be 0.54, while its overall reliability was 0.73. Each item on the inventory includes four response options: “Always”, “Often”, “Rarely”, and “Never”. The scale evaluates six dimensions of mental health: positive self-evaluation, perception of reality, integration of personality, autonomy, group-oriented attitudes, and environmental mastery.

Procedure

All necessary permissions and informed consent were obtained from participants. Rapport was established to ensure comfort. The *Mental Health Inventory* (MHI) questionnaire was then distributed, with clear instructions provided. Participants were encouraged to ask questions if needed and were given unlimited time to complete the questionnaire, ensuring no items were left blank. After completion, questionnaires were collected. The assessment was conducted individually, following the manual guidelines and APA Code of Ethics (APA, 2002).

RESULTS

Data analysis was conducted using a 2x2 factorial design. Statistical techniques, including ANOVA, Mean, Standard Deviation (S.D.), were applied to interpret the results. ANOVA table shows that the F-ratio for independent variable A (IV A) is 1.45, indicating a non-significant effect. In contrast, the F-ratio for independent variable B (IV B) is 6.7, which is significant at the 0.05 level of confidence. Additionally, the interaction effect between both variables is non-significant.

Table- 1 Summary Table of ANOVA for Mental Health

Sources of Variance	Sum of Squares	Degree of Freedom	Mean Squares	F-ratio
A (Geographical background)	948.64	1	948.64	1.45
B (Siblings status)	4,283.44	1	4382.44	6.7*
A x B (Geographical background x Siblings status)	77.44	1	77.44	0.11
Within Error	62,703.04	96	653.15	
Total	68,012.56	99		

**Denotes significance at 0.5 level of confidence.*

Table- 2 Mean and S.D. scores of Mental Health for IV A and IV B

S. No.	Independent Variables	Division of Variables	Standard Deviation	Mean
1	I.V. A- Urban	A1- Single Child	24.43	144.3
		A2- Non-single Child	19.82	150.46
2	I.V. B- Rural	B1- Single Child	28.39	140.76
		B2- Non-single Child	27.7	154

DISCUSSION

The data acquired from our study indicates that the mental health of single-child college students is more adversely affected compared to their peers with siblings. This finding aligns with several recent studies that have reported similar outcomes. For instance, a study published in *Scientific Reports* (2022) found that single children (SCs) were more likely to experience symptoms like dizziness and backaches compared to their peers with siblings (Rastad et al., 2022). Additionally, research highlights that children without siblings often struggle with social interaction. Roberts and Blanton (2001) noted that some only children face significant challenges in social engagements as one of their primary difficulties. Furthermore, a study published in the *Journal of Research in personality* (2019) indicated that adults without siblings exhibited lower average levels of honesty-humility and conscientiousness, along with higher levels of neuroticism and openness, compared to those with siblings (ScienceDirect, 2019).

CONCLUSION

In a nutshell, our research findings indicate that the mental health scores of only-child students are lower than those of students with siblings, confirming a significant difference between IV B1 (single child) and IV B2 (non-single child). Thus, the hypotheses stating a significant variance in mental health between single and non-single child students is supported, suggesting that students with siblings have better mental health. Conversely, no significant difference was observed in the mental health of students based on geographical background (urban vs. rural). Therefore, the hypotheses proposing a significant difference

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between these groups is rejected, as is the interaction effect between IV A (geographical background) and IV B (sibling status).

Limitations

The study's sample size may not represent all college students, and self-reported data could introduce biases. Other influencing factors, like socio-economic status, were not considered.

Significance of the Study

The study shows how sibling status affects the mental health of college students, along with providing insight into the limited role of geographical background in shaping mental health, which can guide future support for students.

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Conflict of Interest

The author(s) declared no conflict of interest.

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