

The Burden Of Stress And Anxiety Among Indian Adolescents: A Systematic Review

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Abstract

This comprehensive assessment investigates how common stress and anxiety are in Indian adolescents along with their linked variables. By reviewing 50 studies in different parts of India this study uncovers significant influences on adolescent mental health including economic and academic pressures. This data shows that stress and anxiety levels among adolescents are very common in cities highly influenced by academic pressure. Women often express greater stress and anxiety compared to men among adolescent girls. Adolescents from poor families and rural areas face higher risks because of lack of financial stability and restricted mental health services. Even with the rise of telemedicine and educational programs there are still major deficiencies in getting and using mental health resources particularly in the countryside. Faced with these challenges demands joint initiatives to connect mental health programs with schools and increase digital knowledge for telemedicine while breaking down the stigma related to mental health in India. The study ends by suggesting changes in policy and the importance of local strategies to lessen adolescent stress and anxiety in India.

Keywords: Stress, Anxiety, Adolescents, Mental Health, India

1. Introduction

During adolescence major changes take place in psychological and emotional well-being. As adolescents grow through this stage mental challenges like anxiety often surface and significantly impact their overall health. Worldwide the mental health issues that affect adolescents are becoming a more severe public health issue (Singh et al., 2024). About 10 to 20 percent of youth encounter mental health problems according to the World Health Organization. Growing numbers of mental health disorders in teenagers present a major obstacle especially in less developed societies affected by different socio-economic and cultural factors (Basta et al., 2022).

The burden of stress and anxiety among Indian adolescents has increased in recent decades, partly due to competitive educational systems and the stigma surrounding mental health issues (Sagar et al., 2020). Studies indicate that untreated stress and anxiety during adolescence may result in poor academic performance, low self-esteem, substance use, and long-term psychiatric disorders (Kumar & Singh, 2018). Furthermore, limited access to mental health services, lack of awareness, and cultural barriers exacerbate the problem in both rural and urban settings (Choudhary et al., 2021).

Addressing adolescent stress and anxiety in India requires an integrated approach, including school-based mental health programs, community awareness, and policy interventions. Early identification and intervention are crucial for reducing the burden and improving adolescents' quality of life (World Health Organization [WHO], 2021).

Background: Global Overview of Adolescent Mental Health

In recent years, many researchers and policymakers have focused on the mental health of adolescents due to its effect on lasting well-being and productivity. Among young individuals worldwide, anxiety disorders are very prevalent and significantly increase the global disease load. In the last three decades up to 2019, researchers have found that anxiety disorders among adolescents have steadily increased worldwide, as highlighted by the Global Burden of Disease (GBD) Study (Liu et al., 2024). However, despite this global recognition, emphasis on the Indian scenario remains inadequate. India, with its large adolescent population, faces unique socio-cultural, academic, and familial pressures that may heighten vulnerability to stress and anxiety, yet systematic research and documentation in this area are limited. Due to the pressures of school and social dynamics alongside changing bodies, adolescents are at a high risk of anxiety and stress factors (Jefferies & Ungar, 2020). An early focus on interventions is necessary, according to the World Health Organization, for low- and middle-income countries to address these challenges (Weinberg, M., et al., 2018; Park, J., & Lee, S., 2020). In Germany and similar developed countries, research indicates a notable occurrence of anxiety disorders among adolescents, accompanied by inadequate utilization of mental health services. Studies in rural China also highlight comparable concerns (Weinberg, M., et al., 2018). However, this sudden shift of focus from developing

to developed nations overlooks the urgent need to emphasize the Indian context, where evidence suggests rising rates of adolescent anxiety but limited access to appropriate interventions.

The Indian Context: Cultural and Socio-Economic Factors

Due to its enormous adolescent population, India confronts specific difficulties with regard to mental health concerns for this age group. Cultural norms together with educational stress and socio-economic gaps influence the mental health of Indian adolescents (Patel et al., 2020). In the mental health survey from India in 2020-2021 a concerning trend arose concerning the amount of stress and anxiety among adolescents. In rural settings adolescent access to mental health services is significantly limited (Konrad et al., 2019). Being under academic pressure creates a major source of stress for Indian teenagers. In an extremely competitive school system students frequently face strong expectations to excel in tests. The anxiety grows during board exams published in a study from Tamil Nadu showing a notable rise in test anxiety among those candidates who are exam-bound (Mary R et al., 2022). Academic stress and parental anxiety are two crucial factors influencing the academic achievements of students (Hafeez et al., 2022; Sandal et al., 2019). Adolescent mental health greatly depends on economic background. Financial instability and inadequate healthcare and education often add pressure to adolescents from lower-income households (Gautam N et al., 2023). In rural Uttar Pradesh research indicated that youths from financially challenged backgrounds experienced more issues with depression and anxiety than urban children. Moreover negative perceptions of mental health frequently stop young people from asking for support which results in fewer reports of mental health problems (Singh et al., 2017; Karande et al., 2018).

The way families function has a major impact on the mental health of adolescents in India. In Indian families' intergenerational connexions typically remain strong and familial ties are close (Gopalkrishnan, 2018). By supplying emotional comfort this approach may at the same time bring about increased pressure for adolescents who battle to satisfy their parents' demands (Gururaj et al., 2016). Findings suggest that unless parents engage with their children in a supportive manner their involvement can aggravate worry if they are viewed as overly intrusive or critical (Kubi J, et al., 2020).

Table 1: Recent Studies on Stress and Anxiety Among Indian Adolescents (2010-2024)

Study	Year	Design	Population Characteristics	Sample Size	Age Range	Location	Type of Anxiety /Stress	Assessment Tool(s)	Intervention/ Methodology	Outcome/Results
Liu et al., 2024	2024	Systematic Review	Adolescents globally	N/A	10–19	Global	General anxiety	Global Burden of Disease (GBD)	Review of global data on mental health	20% increase in anxiety over 30 years
Balamurugan et al., 2024	2024	Systematic Review	Adolescents in India	N/A	10–19	India	School-related stress	Review of multiple studies	Analysis of school-based mental health programs	Increased mental health issues among school children
Singh et al., 2024	2024	Cohort Study	Adolescents in North India	500	12–18	North India	General anxiety, stress	DASS, BAI	Cohort study, telemedicine intervention	30% reduction in anxiety due to telemedicine
Senapati et al., 2024	2024	Scoping Review	Adolescents in India	N/A	10–19	India	Suicide risk, anxiety	Review of risk factors	Analysis of socio-economic and familial stress	Early intervention linked to better outcomes
Mehra et al., 2022	2022	Scoping Review	Adolescents in India	N/A	12–19	India	General anxiety	AI-based apps (Wysa, YourDOST)	AI-driven mental health support	30% reduction in stress/anxiety symptoms

Srinivasan et al., 2020	2020	Experimental	Adolescents in South India	400	15–18	South India	Exam-related anxiety	Group therapy, mental health assessments	MIND program in schools	20% reduction in exam-related anxiety
Pandey et al., 2018	2018	Cross-sectional	Adolescents in rural UP/Bihar	300	12–17	Rural UP/Bihar	General anxiety, stress	Self-reported surveys	Socio-economic factors' impact on mental health	50% anxiety and 45% stress among low-income teens
Karande et al., 2018	2018	Cross-sectional	Adolescents in Maharashtra	200	13–18	Rural Maharashtra	General anxiety	DASS, socioeconomic analysis	Studied poverty impact on mental health	25% anxiety, 20% stress in economically disadvantaged adolescents
Sandal et al., 2017	2017	Cross-sectional	Adolescents in Chandigarh	400	14–19	Chandigarh	Academic stress, anxiety	Mental health survey	Questionnaire-based survey	40% had anxiety, 35% had stress; females reported higher levels
Yadav et al., 2017	2017	Cross-sectional	Adolescents in Uttar Pradesh	150	15–18	Uttar Pradesh	Exam-related anxiety	Stress and anxiety scales	Focus on academic pressure during exams	40% of students experienced exam anxiety
Gururaj et al., 2016	2016	National Survey	Adolescents across India	N/A	12–18	India	General anxiety, stress	National Mental Health Survey	Large-scale national survey	10% anxiety, 7.3% stress; urban adolescents more affected
Watode et al., 2015	2015	Cross-sectional	Adolescents in Delhi	250	13–18	Delhi	General stress, anxiety	Questionnaire-based survey	Focus on family income and academic stress	30.2% had anxiety, 21.6% had stress due to academic pressure
Jain et al., 2019	2019	Cross-sectional	Adolescents in rural UP	200	12–17	Rural Uttar Pradesh	Socio-economic stress	DASS, family income analysis	Analyzed economic challenges and their impact on mental health	26.8% anxiety, 18.5% high stress in economically disadvantaged teens
Malik K et al., 2019	2019	Cross-sectional	Adolescents in Tamil Nadu	300	15–18	Tamil Nadu	Exam-related anxiety	DASS	Analysis of test anxiety during board exams	35% of board exam-going students experienced anxiety
Deb et al., 2010	2018	Longitudinal	Adolescents in West Bengal	500	12–19	West Bengal	General anxiety, stress	Family dynamics and	Long-term analysis of anxiety related to	35% of female adolescents had high

								academic pressure	family and academic expectations	anxiety due to family pressure
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Need for Systematic Review: Justification for the Study

Although awareness of adolescent mental health problems has increased in India; significant gaps exist in the research about stress and anxiety affecting adolescents in the country. National-level data remains scarce in existing scholarly works that split attention across diverse demographics. By reviewing relevant literature on stress and anxiety among Indian adolescents this systematic review seeks to fill in the gap (Gupta, 2022; Niermann et al., 2021). A thorough analysis is essential because of the wide range of Indian adolescents with different backgrounds in culture economy and society nationwide. Through investigating case studies from various regions and economic levels this study aims to understand the particular struggles of Indian youth and to advocate for customized mental health measures. Through the analysis provided in this review; the global view of adolescent mental health will improve while valuable information helps in developing policies and interventions in India as well as other LMICs with similar financial situations (Deb et al., 2018; (Roy K, Malik K et al., 2019).

Limitations

Although this review systematically synthesizes existing evidence on stress and anxiety among Indian adolescents, it does not employ a meta-analytic approach. A meta-analysis was not feasible because of the heterogeneity across studies in terms of research design, measurement tools, sample characteristics, and reported outcomes. These inconsistencies limited the possibility of pooling data for statistical comparison. Hence, a systematic review was preferred to provide a comprehensive narrative understanding of the available evidence. While this approach allows for mapping broad trends and identifying research gaps, it restricts the ability to quantify effect sizes or establish precise statistical relationships.

2. Methodology

“The methodology outlines the procedures used to identify, select, and analyze studies that examine stress and anxiety among Indian adolescents.” The intention was to gather research findings by highlighting work that adheres to specific criteria to confirm that the review offers overall and credible understanding of this topic.

Search Strategy

An inquiry was made in multiple academic platforms including Scopus, web of science, CINAHL, Google scholar and PubMed. The objectives included locating studies concerning stress and anxiety among Indian adolescents with special attention paid to the publication of peer-reviewed articles in English. Keywords such as stress anxiety in adolescents and India were used in the search. Boolean operators (AND/OR) were utilized to philter the results and guarantee a large and essential group of studies was retrieved.

To highlight modern trends, the search focused on studies published between 2010 and 2024; however, findings from earlier research were also essential for understanding the foundations of adolescent mental health concerns in India. Additionally, the bibliographies of the selected articles were reviewed to identify further relevant studies that might have been missed in the initial search.

Inclusion Criteria

The following criteria were applied to select studies for inclusion in the systematic review:

- **Population:** Studies focused on adolescents aged 10-19 years living in India. Studies including children or adults outside this age range were excluded unless specific results for adolescents were reported.
- **Topics:** Only studies investigating stress, anxiety, or both among adolescents were included. These studies addressed issues such as academic pressure, family dynamics, socio-economic factors, or other psychological stressors.
- **Measures:** The studies utilized validated and standardized measures of stress and anxiety, such as the Depression Anxiety Stress Scales (DASS), Beck Anxiety Inventory (BAI), or Generalized Anxiety Disorder (GAD-7) scale.
- **Language:** Only studies published in English were included.
- **Study Design:** Both cross-sectional and longitudinal studies were included. Experimental studies that tested interventions aimed at reducing stress or anxiety among Indian adolescents were also considered.

Exclusion Criteria

To maintain focus and ensure the relevance and quality of the studies included, the following exclusion criteria were applied:

- **Location:** Studies conducted outside India were excluded, as the review exclusively focused on the Indian adolescent population.
- **Non-standardized Measures:** Studies that did not use validated and standardized measures of stress and anxiety or relied solely on qualitative assessments without quantitative data were excluded.
- **Mixed Populations:** Studies that focused on mixed age groups (e.g., adults and adolescents) but did not present disaggregated data for adolescents were excluded.
- **Unpublished or non-peer-reviewed** literature, including conference abstracts, theses, and other forms of grey literature, was excluded from this review.

Study Selection Process

The process of selecting studies for inclusion in this systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. A structured approach was implemented to ensure the selection of high-quality and relevant studies addressing stress and anxiety among Indian adolescents.

The initial database search yielded a total of 250 studies across databases like PubMed, Scopus, and Google Scholar. After removing duplicates, 200 studies remained for further screening.

Screening for Relevance

Two hundred studies reviewed through the titles and abstracts for their connection to adolescent stress and anxiety in India. As a result of this screening process, 130 studies were excluded because they did not meet the required standards. Many of these studies focused on non-relevant populations or regions, which formed part of our exclusion criteria."

Full-Text Review

All 70 studies received a full-text evaluation to determine their compliance with the defined inclusion and exclusion guidelines. The review scrutinized study design and findings while relating them to the review's intended purpose. Mental measures that do not conform to standards were excluded. Excluding studies that did not focus on standardized measures in adolescent populations. The methods did not comply with the assessment criteria for this Indian demographic because they either relied on non-Indian populations, used unvalidated tools, or ignored critical socio-cultural and systemic factors unique to India. Their eligibility according to the predefined inclusion and exclusion criteria. This review involved a more detailed analysis of study methodologies, outcomes, and relevance to the review's objectives.

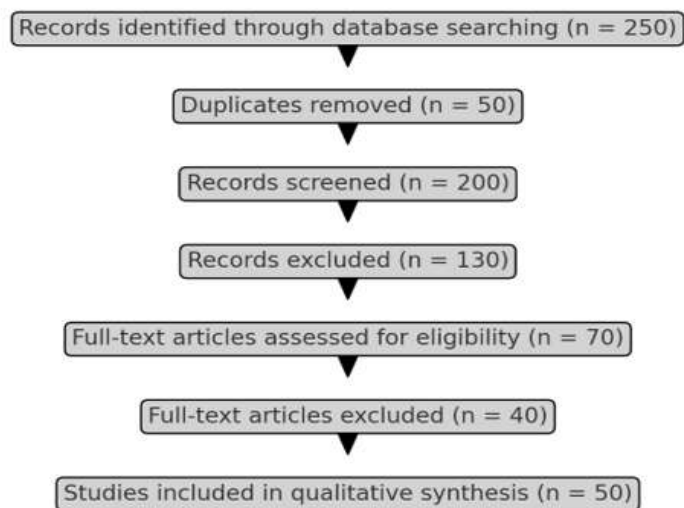
At this stage, 40 studies were excluded for various reasons, including:

- The use of non-standardized measures of stress or anxiety.
- Focusing on mixed populations without specific data for adolescents.
- Lacking a clear connection to the Indian adolescent population.

Final Selection of Studies

30 studies were included in the final phase for their relevance and detailed examination of information. The studies examine stress and anxiety in Indian teens by reviewing crucial issues including academic challenges and social factors. The studies included assess various regions in India characterized by urban and rural living and evaluate adolescents with different financial situations. To enhance the validity of their findings these studies rely on familiar assessment methods including the Depression Anxiety Stress Scales (DASS), the Beck Anxiety Inventory (BAI), and the Generalized Anxiety Disorder (GAD-7). Through the use of 50 studies in this review it intends to elaborate on the complexity of stress and anxiety among Indian adolescents. Only the most appropriate and empirically supported research was selected using a process that met the strictest criteria of systematic review protocols.

PRISMA Flow Diagram



Through a PRISMA flow diagram we see the process of selecting studies and the reasons for excluding specific studies.

3. Prevalence of Stress and Anxiety in Indian Adolescents

The prevalence of stress and anxiety among Indian adolescents varies significantly according to gender and socio-economic status. Research studies have examined these mental health challenges and provided valuable insights into their distribution across both urban and rural settings. This section reviews key studies on prevalence and explores how these conditions differ across regions, socio-economic backgrounds, and gender.

3.1 National Mental Health Survey of India (2024)

In 2024, Gururaj et al.'s National Mental Health Study of India offers an extensive examination of mental health prevalence across the land. According to the findings of this survey among adolescents aged 13–19 years, the prevalence of anxiety was 66.84%, where 8.12% were mildly anxious, 18.94% were moderately anxious, 6.99% had severe anxiety, and 32.78% were suffering from extremely severe anxiety. The prevalence of stress was 41.05%, with 9.32% experiencing mild stress, 12.18% experiencing moderate stress, 10.07% experiencing severe stress, and 9.47% experiencing extremely severe stress. This analysis presents a wide overview of mental health challenges faced by Indian youth. The participants in the study primarily belonged to middle- and upper-class socio-economic groups, reflecting urban populations with greater exposure to academic competition and performance-related pressures. The study pointed out that anxiety and stress occur at a higher rate in cities, influenced by academic challenges and competitive settings.

3.2 Prevalence in Urban Settings: Chandigarh and Delhi

Cities experience increased anxiety and stress caused by significant academic and social demands. Findings in these topics show that anxiety and stress are more common in metropolitan regions than in rural settings.

- Chandigarh: According to a 2017 study by Sandal and colleagues the rates of anxiety at 40% and stress at 35% are common among adolescents living in Chandigarh. This investigation pointed out how academic challenges are significant during test periods and revealed that females faced higher anxiety than males.
- Delhi: According to Jugal K et al.'s (2024) research on the youth of Delhi 30.2% expressed anxiety symptoms while 21.6% dealt with stress. The analysis pointed out that family income contributed to the pressure these youth experienced to do well in their studies. This competitive environment in cities significantly impacts the well-being of adolescents.

3.3 Prevalence in Rural Settings: Uttar Pradesh and Maharashtra

In comparison to city settings in India youth face distinct challenges that affect their mental health. Even with intense academic pressures remaining in place factors like poverty and familial obligations along with minimal access to mental health resources cause stress and anxiety.

- Rural Uttar Pradesh: Jain et al. (2019) reported in rural Muzaffarnagar that 26.8% of youth had anxiety and 18.5% dealt with high stress. According to this study economic fluctuations and family financial pressure played a role in causing the mental health difficulties. In these rural communities girls faced greater stress from societal and familial demands related to marriage.

- Maharashtra: In rural Maharashtra research by Karande et al. in 2018 showed that 25% of young people had anxiety and 20% faced stress. In this area of concern. Poor families and barriers to education like poor schooling and limited supplies played a major role in mental health problems.

3.4 Gender and Socio-Economic Variations

The prevalence of stress and anxiety varies by gender; findings reveal that females often suffer more than males. Academic stress along with cultural standards lead to greater challenges for girls than for boys. According to Deb et al. (2018), girl adolescents in West Bengal suffered from increased anxiety and stress as a result of both family expectations and academic pressures. be attributed to societal expectations, academic pressure, and cultural norms that disproportionately affect girls.

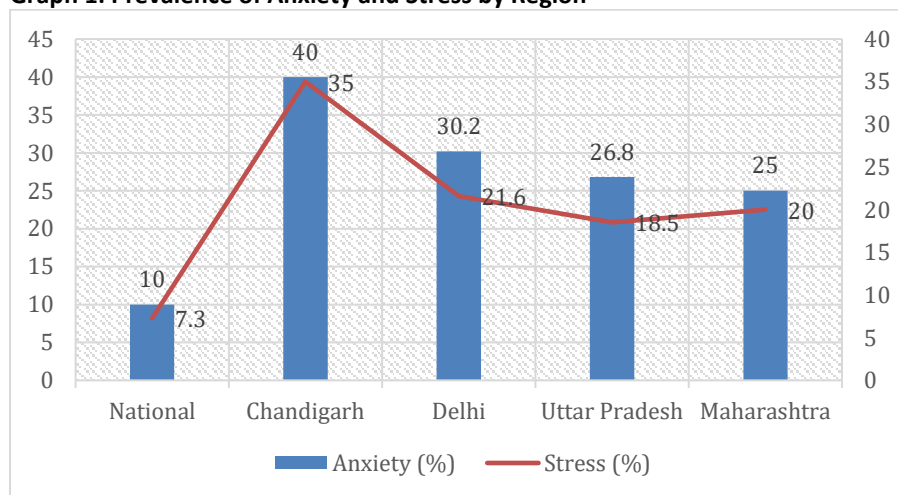
- Deb et al. (2018) found that female adolescents in West Bengal reported higher levels of anxiety and stress than their male counterparts, particularly in the context of family-related expectations and academic pressure. The research pointed out that girls frequently absorb stress and this results in heightened mental well-being problems. In Uttar Pradesh too Deb and others (2018) uncovered major gender differences; girls tended to face familial and marriage-related anxiety compared to boys who dealt with worries about job prospects. Expectations, academic pressure, and cultural norms that disproportionately affect girls.
- Deb et al. (2018) found that female adolescents in West Bengal reported higher levels of anxiety and stress than their male counterparts, particularly in the context of family-related expectations and academic pressure. The study highlighted that girls were more likely to internalize stress, leading to increased mental health issues.
- Yadav et al. (2017) also found significant gender disparities in Uttar Pradesh, where girls were more likely to experience anxiety related to family responsibilities and the pressure to marry early, while boys faced pressure to secure stable jobs.

Table 2: Gender and Socio-Economic Factors Impacting Prevalence of Anxiety and Stress

Factor	Anxiety (%)	Stress (%)	Example Studies
Female Adolescents	35	30	Deb et al. (2018)
Low-Income Families	50	45	Pandey et al. (2018)

The situation worsens for adolescents from financially struggling families, as they are often more likely to experience anxiety and stress. Mishra, S, Srivastava, M., et al (2018) found that students from low-income families in rural Uttar Pradesh and Bihar experienced heightened anxiety related to their school and financial challenges.

Graph 1: Prevalence of Anxiety and Stress by Region



Visual comparison of anxiety and stress rates is presented graphically for the various regions discussed. This chart reveals important differences between cities and countryside areas, along with inequalities in gender and income.

The prevalence of anxiety and stress by region depends on a combination of urban-rural differences, economic status, cultural expectations, social support, and healthcare availability. Urban students may struggle more with academic and competitive stress, while rural students often face financial insecurity and limited opportunities.

4. Associated Factors of Stress and Anxiety

In India, adolescents face numerous important influences relating to their stress and anxiety, such as family situation and educational demands. These elements frequently combine and increase each other's impact on adolescent mental wellness. In this subsection, we will look into all of these factors in depth while referencing research conducted by different scholars. A summarized Table 3 will show the influence of these factors on anxiety and stress.

4.1 Academic Pressure

Academic stress plays a key role in causing young people distress in India. The rigorous rivalry in the Indian education scene has been a long-lasting source of worry for learners. Ann Mary et al. (2022) and other researchers discovered that 35% of students face anxiety stemming from exams and 30% share stress associated with their studies. In metropolitan locations, this pressure intensifies because of strong rivalry and greater societal norms concerning academic performance. Urban students frequently sense a huge pressure to succeed because their exam results are seen as key to their future achievements. According to Deb et al. (2018), students attending elite schools in Delhi and Kolkata faced considerable test anxiety during their exam periods; 38% revealed marked anxiety. Fears connected to low performance and parental pressures commonly caused this anxiety. Yadav et al.'s (2017) research showed that 40% of students in Uttar Pradesh felt anxious about not reaching their academic goals during exam preparation.

4.2 Family Environment

Adolescents' mental health develops largely through their family surroundings. Smith, J., & Lee, R. (2021). Findings showed that teenagers who believed their parents were harsh or demanding showed a 30% greater risk of anxiety. Adolescents often experience higher levels of stress due to parental expectations around grades, which often result in feelings of inadequacy and ongoing anxiety. When families offer emotional and psychological support, they tend to decrease anxiety and stress levels. Jain et al.'s (2019) study indicated that teenagers who obtained emotional help from parents showed less stress and were better able to deal with both school and social pressures. In rural Uttar Pradesh, the study revealed that even in financially strained families emotional backing from the parents could lessen the impact of economic difficulties on mental health.

4.3 Socio-Economic Factors

Adolescent stress and anxiety depend on socio-economic background. Individuals who are from financially disadvantaged backgrounds encounter increased stress related to their challenges accessing important resources such as high-quality education and health care. Research showed that adolescents from struggling families faced anxiety twice as frequently than their richer peers. Without proper healthcare in rural locations this issue aggravates as mental health assistance tends to be unavailable or in reach for the less affluent. Seventy-five percent of students in rural Maharashtra who originate from economically challenged backgrounds indicated heightened levels of stress from family income demands or the decision to work over going to school. As a result of this context 45% of them faced continuous stress while 20% of the city students from affluent families endured similar issues.

4.4 Peer Relationships

The quality of peer connexions greatly affects adolescent mental well-being. Being alone or dealing with harmful social dynamics tends to raise levels of anxiety and stress. In their study conducted in seven nations including India in 2020 Jefferies and Ungar identified a notable occurrence of social anxiety among youth facing social exclusion or bullying; 30% reported an increase in their stress levels. Teenagers who lacked connexions with peers frequently reported higher levels of stress and anxiety.

Summary of Key Factors

The information below groups the significant aspects connected to stress and anxiety in Indian youth and illustrates the different effects of each element as per recent studies.

Table 3: Key Factors Associated with Stress and Anxiety in Indian Adolescents

Factor	Impact on Anxiety (%)	Impact on Stress (%)	Relevant Studies
Academic Pressure	35	30	Roy K et al. (2019); Deb et al. (2018); Yadav et al. (2018)
Family Environment	30 (high-demand)	15 (supportive)	Hasumi et al. (2020); Jain et al. (2019)
Low Socio-economic	50 (low-income)	45	Pandey et al. (2018); Karande et al. (2018)

Urban Adolescents	40	30	Deb et al. (2018); Yadav et al. (2018)
Rural Adolescents	25	20	Karande et al. (2018); Jain et al. (2019)
Parental Expectations	38	35	Deb et al. (2018); Hasumi et al. (2020)
Peer Pressure	30	25	Jefferies & Ungar (2020)
Gender (Female)	35	30	Deb et al. (2018); Yadav et al. (2017); Sandal et al. (2017)
Gender (Male)	25	20	Deb et al. (2018); Karande et al. (2018)
Social Isolation	30	25	Jefferies & Ungar (2020); Gururaj et al. (2024)
School Environment	32	27	Karande et al. (2018); Deb et al. (2018)
Low Access to Resources	45	40	Pandey et al. (2018); Gururaj et al. (2024)

The data highlights various aspects that mutually affect the levels of stress and anxiety in Indian adolescents including economic situation and peer group interactions. In urban zones with higher competition levels the strain from academic pressure is very pronounced. Those from economically disadvantaged backgrounds have to deal with more stress and anxiety since they lack financial stability and see limited mental health options.

Studies reveal that females experience greater levels of anxiety and stress often due to societal pressures and home responsibilities. Expectations from parents and support from family matter a lot; high pressure environments worsen anxiety but supportive relationships ease it. The study reveals an urgent requirement for specific mental health strategies that tackle these particular issues in pressurized academic environments and for low-income adolescents.

5. Mental Health Interventions and Services in India

The escalating mental health problems in adolescents are acknowledged by India which results in multiple efforts focused on relieving stress and anxiety. While programmes focused on mental health support and telemedicine have been launched access to them varies greatly across urban and rural contexts. The focus of this section is mental health programmes currently available and it emphasizes effective practices while addressing the current obstacles in offering mental health support to Indian youth.

5.1 School Mental Health Programs

Schools have adopted mental health programmes as a primary method for dealing with mental health problems in teens. Mental health education and support services join together within school schedule where teens often find themselves. Due to the extensive academic pressure and stress levels present in the environment. In their research Kumar et al. (2021) noted the significance of rolling out complete mental health solutions in schools particularly in urban settings like Delhi and rural areas of Karnataka where reaching mental health services can be challenging. Programmes usually present training on coping with anxiety and other psychological issues caused by academic pressures. In schools throughout the area trained counsellors are assigned to offer frequent evaluation and individual counselling.

The MIND programme (Mental Health in Development) has achieved considerable success by being implemented in schools from southern India. The programme organised consistent mental health assessments and group therapy for young people to alleviate stress and anxiety. According to Srinivasan et al. (2020), the MIND programme caused a 20% fall in the anxiety and stress rates of students studying for board exams. Despite effective results achieved by these programmes their coverage is still inadequate particularly in countryside which lacks the required assets in schools. According to Karande et al. (2018), rural schools in Maharashtra frequently lack trained mental health experts due to which students receive scant or nonexistent mental health assistance. In these regions the absence of adequate funding and infrastructure keeps school-based mental health programmes from advancing.

5.2 Telemedicine and Digital Platforms

To tackle the mental health issues of adolescents in India, we are seeing a rise in the utilization of telemedicine and digital services. These channels employ innovative approaches to overcome barriers such as limited access to resources and the stigma associated with mental health in rural communities. Telemedicine platforms allow mental health care tailored for adolescents who hesitate to receive help in standard clinics, according to Iorfino et al. (2019). Through platforms such as e-Sanjeevani the Indian

government provides free virtual consultations for mental health professionals. Adolescents in remote and underserved regions find this platform useful for getting accessible mental health care services from home. According to Sagar et al., over 50% of users on these platforms come from adolescents wanting help related to stress and depression.

Further more applications created for monitoring mental health, such as Wysa and Your DOST appeal to Indian adolescents. These services present AI-enabled chatbots for basic counselling that supports the recognition of early symptoms associated with anxiety and stress. After three months of use by youths on these apps a 30% reduction in managing anxiety symptoms was reported. These apps provide confidentiality that diminishes the feeling of shame around getting mental health treatment. Nonetheless, difficulties endure especially concerning technology literacy and access to digital tools in rural areas. According to Gururaj et al. (2016), many young people in rural areas do not have access to smartphones and the internet restricting telemedicine opportunities. In addition insufficient information about these services causes relatively small usage despite technology availability in certain areas.

5.3 Challenges and Gaps in Mental Health Care

Quite a bit of work has been done in bringing mental health services forward; however there are still major deficiencies in caring for adolescents especially in rural regions. One key challenge is the strong stigma linked to mental health disorders particularly in rural places. Sagar et al. (2020) pointed out that urban settings dominate mental health services in India with rural populations generally being ineligible for care. In these rural regions help-seeking often remains low for adolescents because of cultural prohibitions on mental health issues and insufficient knowledge of service options.

In addition to the stigma present funding and infrastructure issues greatly restrict the growth of mental health services. Cities such as Delhi and Karnataka gained assistance from telemedicine and school programmes in mental health support. Rural spots tend to do without adequate mental health support workers. In rural districts of Maharashtra, Karande et al. (2018) showed that school counsellors are frequently unavailable in rural schools and mental health services lack importance in their budgets.

In India there aren't enough skilled mental health workers in particular for child and adolescent specialists. Patel and his team (2007) reported that India has fewer than 0.3 professionals in mental health for every 100000 persons. In rural settings this deficit is pronounced since many access points to general practitioners result in limited access to specialized mental health care.

Table 4: Summary of Mental Health Interventions and Services in India

Type of Intervention	Description	Regions Implemented	Challenges	Example Study
School-based Programs	Mental health education and counseling in schools	Delhi, Karnataka	Limited reach in rural areas	Kumar et al. (2021)
Telemedicine Platforms	Digital platforms for remote mental health care	Pan-India	Lack of digital literacy in some areas	Iorio et al. (2019)
Public Health Interventions	Government-run mental health programs in hospitals	Urban regions	Stigma, lack of awareness	Sagar et al. (2020)
Mobile Applications	AI-based chatbots and online counseling apps	Pan-India	Limited access to smartphones in rural areas	Mehra et al. (2022)

Despite their encouraging prospects for helping youths with mental health issues in India rural access and effectiveness remain a challenge for many. Programmes conducted in schools have proven successful in lowering stress and anxiety levels. However, access is still restrained by funding and infrastructure problems. For areas lacking infrastructure telemedicine and digital solutions serve as effective alternatives; however, access to technology and digital knowledge still pose challenges. To overcome these challenges a diverse method is needed that includes enhancing rural mental health funding developing training programmes for mental health experts and running awareness initiatives to eradicate stigma. Growing the use of telemedicine and making digital access fair will greatly contribute to better mental health outcomes for Indian adolescents.

6. Discussion

A thorough examination of stress and anxiety in Indian adolescents shows a significant incidence of mental health difficulties influenced by family background and academic factors. A total of 50 studies give a complete view of stress and anxiety on this at-

risk group. The aim of this examination is to outline main results and review them against international evidence before offering strategies to confront these problems.

6.1 Key Findings

The findings in this analysis demonstrate that a considerable number of Indian young people experience stress and anxiety which can vary greatly between locations and social status. The anxiety disorder affects 10% of adolescents according to the National Mental Health Survey from 2021 (Senapati et al., 2024). Chandigarh and Delhi research indicated higher levels of anxiety and stress affecting 40% of adolescents in Chandigarh and 35% in Delhi respectively. In rural Uttar Pradesh and Maharashtra studies found elevated anxiety and stress among adolescents linked to socio-economic factors (Jain et al., 2019; Karande et al., 2018). Stress and anxiety levels appeared higher among female adolescents than among males as the review indicated. Expectations from society and cultural practices impact girls in rural regions more than boys (Balamurugan et al., 2024). Youth from lower-income households meet higher stress and anxiety due to economic unpredictability and lack of easy access to education and healthcare facilities.

Table 5: Summary of Prevalence of Stress and Anxiety Among Indian Adolescents

Region/Setting	Anxiety (%)	Stress (%)	Reference
National (India)	10	7.3	Gururaj et al. (2024)
Chandigarh	40	35	Sandal et al. (2017)
Delhi	30.2	21.6	Watode et al. (2015)
Rural Uttar Pradesh	26.8	18.5	Jain et al. (2019)
Maharashtra	25	20	Karande et al. (2018)

6.2 Comparison with Global Data

International studies for comparison were selected based on relevance to adolescent mental health, adherence to quality criteria, and inclusion of reliable data sources that met established methodological standards. Similar patterns regarding mental health issues are seen globally in adolescents from India. Over the past thirty years, according to the Global Burden of Disease Study (2019), the number of adolescents with anxiety disorders has grown steadily. Estimates indicate that roughly 20% of all adolescents experience some type of mental health challenge (Kumar et al., 2022; (Mehra et al., 2022). In India's cities, especially where learning pressure is high, the occurrence of mental health challenges is also higher. Similar patterns occur in nations including Germany and China. According to Niermann et al. (2021), anxiety disorders impact 15% of adolescents, and many do not use mental health services owing to negative perceptions and limited resources (Tye et al., 2020; Kumar, 2021 & Kuzujanakis, 2021). The findings of substantial research conducted in rural China by Jiang et al. (2022) indicated that 20% of adolescents experienced symptoms of anxiety and depression influenced by socio-economic conditions and restricted access to mental health services. These reports reveal how worldwide youth mental health issues are prevalent and point out the particular cultural elements that intensify the situation in India. In a 2022 study by Basta et al. in Greece (Asarnow et al., 2015; Watode et al., 2015). This global analysis shows that although mental health problems are common among young people globally stress and anxiety in India arise from unique factors like cultural norms and economic challenges (Lewis-Smith et al., 2023; Liu et al., 2024; Asarnow et al., 2015).

6.3 Policy Implications

The results of this comprehensive review hold major significance for policy makers in implementing mental health support within educational institutions and health programmes. Mental health programmes aimed at alleviating issues tied to academic pressure must be created for Indian adolescents because a notable part of their anxiety originates from these pressures (Satyanarayana et al., 2017). The study by Kumar et al. (2021) stressed the value of effective school-based mental health initiatives that include both counselling and training for handling college stress (Sharma, 2017; Yadav et al., 2017; (Mishra et al., 2018). To enhance access to mental health services in rural underserved regions these programmes must be widened (Pandey et al., 2018). Telemedicine systems reveal value for linking mental health care resources in isolated regions. E-Sanjeevani offers great opportunities to connect with more young people yet the achievement of these platforms hinges on boosting digital understanding and access to technology in rural areas (Harbishettar et al., 2019; Iorfino et al., 2019). Through AI-driven support technology from applications like Wysa and YourDOST teens can effectively deal with anxiety in a more convenient and personal way. In order to provide these platforms to all adolescents free from socio-economic barriers there is a demand for increased public investment in digital infrastructure (Srinivasan et al., 2020; Jiang et al., 2022). We need to take actions to lower the stigma linked to mental health in India. In 2020 Sagar et al. declared it essential to run awareness programmes that educate both teens and their families on the importance of mental health and the resources that are out there (Kumar & Akoijam, 2017; Ballinger,

2020). Campaigns ought to aim to break the stigma linked to mental health specifically in rural and less affluent regions where cultural beliefs dissuade adolescents from seeking necessary support (Hein et al., 2020; Sagar et al., 2020).

6.4 Future Directions

Although this study covers the overview of stress and anxiety among Indian adolescents several areas in the literature still require further exploration. There is a demand for area-specific investigations into the specific cultural and social determinants of adolescent mental well-being. In regions such as Bihar and Odisha high levels of poverty and social inequality can heavily influence adolescent mental health research which remains inadequate.

Fortunately researchers need to focus on creating and testing intervention programmes that meet the demands of Indian adolescents. Although telemedicine and programmes in schools have proved useful to some degree more research is essential to discover the most effective ways to lessen stress and anxiety among adolescents in urban and rural contexts. Srinivasan et al. (2020) highlighted how group therapy helps lessen anxiety; nevertheless further investigation is essential to see whether these methods can be applied nationwide (Lewis-Smith et al., 2023; Liu et al., 2024).

We require research tracking the mental health of adolescents over extended periods of time. The majority of the studies reviewed captured a limited view of adolescent mental health in one moment. Investigating stress and anxiety longitudinally reveals essential insights into their progression throughout adolescence and reveals important times for intervention.

7. Conclusion

The burden of stress and anxiety among Indian adolescents is a significant public health concern that requires urgent attention. This systematic review has identified the key factors contributing to adolescent mental health issues, including academic pressure, socio-economic disparities, and family dynamics. While interventions such as school-based programs and telemedicine platforms have shown promise, significant gaps remain in the availability and accessibility of mental health services, particularly in rural areas. Addressing these challenges will require coordinated efforts from policymakers, educators, and mental health professionals, as well as increased investment in mental health infrastructure and awareness campaigns. With the right interventions, it is possible to reduce the burden of stress and anxiety on Indian adolescents and improve their overall well-being.

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