



Analyzing emotional well-being of teens across urban and rural settings with gender-based perspectives

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Abstract

The emotional well-being of adolescents is a critical component of their overall health, influencing academic performance, social interactions, and long-term mental health outcomes. This study examines the emotional well-being of teenagers across urban and rural environments, focusing on gender-based perspectives to understand how contextual and sociocultural factors impact emotional health. Employing a mixed-methods approach, quantitative surveys assessing anxiety, depression, and self-esteem levels were administered to a representative sample of 800 teens (aged 13-18) from diverse urban and rural schools, complemented by qualitative focus groups to capture nuanced gender-specific experiences. Results indicate significant disparities in emotional well-being between urban and rural adolescents, with urban teens reporting higher anxiety levels and rural teens facing greater social isolation. Gender differences were pronounced, as female adolescents across both settings exhibited higher rates of depressive symptoms, while males reported lower help-seeking behavior. These findings highlight the complex interaction between environment and gender in shaping teen emotional health. The study underscores the need for tailored mental health interventions that consider both geographic and gender-specific factors to effectively support adolescent well-being. Policymakers, educators, and healthcare providers should prioritize inclusive strategies that address these disparities to foster healthier developmental outcomes.

Keywords: Emotional Well-being, Adolescents, Urban vs. Rural, Gender Differences, Mental Health, Anxiety, Depression, Teen Development

Introduction

Background and Context

Adolescence represents a critical developmental stage characterized by rapid physical, psychological, and social changes. During this period, emotional well-being becomes paramount, as it significantly influences not only immediate quality of life but also long-term mental health outcomes. Emotional well-being encompasses a spectrum of psychological states, including mood, anxiety levels, self-esteem, and coping mechanisms, all of which contribute to an adolescent's ability to navigate challenges effectively. The World Health Organization estimates that approximately 10-20% of adolescents globally experience mental health conditions, yet many remain underdiagnosed and undertreated, underscoring the need for targeted research and intervention.

Understanding the emotional health of teens requires a nuanced exploration of the environments in which they grow. Urban and rural settings differ markedly in terms of socio-economic conditions, access to resources, community structure, and exposure to stressors. Urban environments, while often providing greater access to educational and health resources, may also present heightened stressors such as overcrowding, pollution, and social competition. Conversely, rural areas might offer closer-knit communities and natural surroundings but face challenges like social isolation, limited healthcare infrastructure, and fewer recreational opportunities. These environmental factors play a critical role in shaping adolescents' emotional experiences.

Gender further complicates this dynamic. Socialization processes, cultural expectations, and biological factors contribute to divergent emotional responses and coping

strategies among male and female adolescents. Research consistently shows that female teens report higher rates of depression and anxiety, whereas males are often less likely to seek help or express emotional distress openly. Exploring these intersections—between environment and gender—provides a comprehensive framework for understanding adolescent emotional well-being.

Importance of the Research

The importance of examining emotional well-being in adolescence, especially through the dual lenses of urban-rural context and gender, lies in the potential for early identification and tailored intervention. Adolescents with poor emotional health are at higher risk for academic difficulties, substance abuse, risky behaviors, and long-term psychiatric disorders. Given that urban and rural settings pose distinct risks and protective factors, interventions that work well in one environment may be ineffective or even detrimental in another. Similarly, gender-sensitive approaches are crucial because emotional experiences and health-seeking behaviors differ widely between males and females.

Despite growing awareness about adolescent mental health globally, much of the existing research disproportionately focuses on urban populations or treats adolescent groups as homogeneous without sufficient consideration of gender differences. This oversight risks perpetuating gaps in mental health services and fails to address the nuanced needs of diverse adolescent populations. Comprehensive data that stratifies emotional well-being by both environment and gender is essential for crafting evidence-based policies, school programs, and clinical practices.

Literature Review

A substantial body of literature has explored adolescent mental health, but with varying degrees of attention to environment and gender. Studies conducted in urban contexts often highlight stressors such as academic pressure, peer competition, and exposure to violence. For example, research from metropolitan areas in the United States and Europe reports elevated levels of anxiety and depression linked to fast-paced lifestyles and socio-economic disparities. Conversely, rural studies emphasize social isolation, lack of anonymity, and limited mental health resources as critical issues affecting emotional well-being. A 2020 survey by the National Institute of Mental Health found that rural adolescents had a 30% lower rate of mental health service utilization compared to their urban counterparts, despite reporting similar or higher levels of emotional distress.

Gender differences in adolescent emotional health are well documented. Females tend to report higher rates of depressive symptoms, anxiety disorders, and internalizing behaviors, while males are more prone to externalizing behaviors such as aggression and substance abuse. Several studies suggest that social norms and expectations discourage male adolescents from expressing vulnerability, which can lead to underreporting and untreated conditions. For instance, a longitudinal study involving over 2,000 adolescents in Australia revealed that female teens were twice as likely as males to report symptoms of anxiety and depression by age 16.

Few studies, however, have systematically combined the variables of gender and environment. Existing research often isolates these factors or examines them in limited geographic scopes. For example, a 2019 study focusing on urban Indian adolescents explored gendered emotional challenges but did not compare these findings to rural populations. Similarly, rural-focused research in Latin America largely overlooks gender nuances, tending to aggregate data without disaggregation. This gap indicates a pressing need for comprehensive, comparative studies that incorporate both perspectives to provide a fuller picture of adolescent emotional well-being.

Research Gaps and Unanswered Questions

While prior research contributes valuable insights, several gaps remain. First, there is a paucity of large-scale studies that directly compare urban and rural adolescent populations within the same socio-cultural framework, making it difficult to isolate the influence of environment independent of culture or policy. Second, the intersectionality of gender with environmental factors remains underexplored, particularly in regions undergoing rapid urbanization or demographic shifts. Third, qualitative insights into the lived experiences of adolescents, especially regarding how they perceive and cope with emotional distress across different settings, are limited.

Moreover, much of the literature relies on quantitative self-report scales that may not capture the complexity of emotional experiences or cultural differences in expressing distress. There is also a need for updated data reflecting contemporary challenges, such as the impact of digital technology, social media, and the COVID-19 pandemic on adolescent emotional health, which disproportionately affects urban and rural youth differently.

These gaps highlight the necessity for a multi-dimensional research approach that integrates quantitative data with qualitative narratives, considers gender through a culturally sensitive lens, and contrasts urban-rural environments to generate actionable knowledge.

Research Objectives and Questions

This study aims to fill these gaps by analyzing the emotional well-being of adolescents across urban and rural settings, emphasizing gender-based perspectives. The primary objectives are:

1. To assess and compare levels of anxiety, depression, and self-esteem among urban and rural adolescents.
2. To examine gender differences in emotional well-being within and across these environments.
3. To explore how adolescents in different settings perceive and cope with emotional distress through qualitative focus groups.
4. To identify environmental and gender-specific risk and protective factors influencing emotional health.

The key research questions guiding this study are:

- How does the emotional well-being of teens differ between urban and rural settings?
- What gender-based patterns emerge in emotional health indicators among adolescents in these environments?
- How do adolescents from different genders and settings describe their emotional experiences and coping strategies?
- What implications do these differences have for mental health interventions and policies targeting youth?

Scope and Structure of the Paper

This paper focuses on adolescents aged 13 to 18, a developmental period marked by critical emotional and social transitions. The geographic scope includes multiple urban and rural sites within a defined national context to ensure cultural consistency while capturing environmental variability. The study employs a mixed-methods design, integrating quantitative survey data with qualitative focus group insights to enrich understanding.

The paper is organized as follows: after this introduction, the methodology section details the research design, participant selection, data collection instruments, and analytical procedures. The results section presents findings related to emotional well-being measures, gender comparisons, and thematic analyses from qualitative data. The discussion interprets these findings in light of existing literature, highlights implications for practice, and acknowledges study limitations. Finally, the conclusion summarizes key insights and offers recommendations for future research and policy development.

Methods

This study employed a mixed-methods research design combining quantitative survey data with qualitative focus group discussions to provide a comprehensive understanding of adolescents' emotional well-being across urban and rural settings, with a focus on gender differences. The mixed-methods approach was chosen to capitalize on the strengths of both quantitative and qualitative data—quantitative data allowed for measurement and comparison of emotional health indicators across groups, while

qualitative data provided deeper insight into adolescents' lived experiences and coping mechanisms.

The population targeted for this study comprised adolescents aged 13 to 18 years attending secondary schools in selected urban and rural areas within the same country. A multistage sampling method was used to ensure representativeness and diversity. First, geographic regions were stratified into urban and rural categories based on national census data and administrative classifications. Within each category, schools were randomly selected to participate. From each school, students were randomly sampled to complete the survey, aiming to achieve balanced representation across gender and age groups. A total of 800 adolescents participated in the quantitative survey—400 from urban schools and 400 from rural schools. Gender distribution was approximately equal, with 51% females and 49% males.

Data collection took place over three months during the academic year. For the quantitative phase, a structured self-administered questionnaire was developed, incorporating standardized and validated scales widely used in adolescent mental health research. These included the Generalized Anxiety Disorder-7 (GAD-7) scale to measure anxiety symptoms, the Patient Health Questionnaire-9 (PHQ-9) to assess depression severity, and the Rosenberg Self-Esteem Scale to gauge self-esteem levels. The questionnaire also included demographic questions and items related to environmental factors such as family structure, socioeconomic status, and access to community resources. Surveys were administered in classrooms under the supervision of trained research assistants to ensure consistent administration and clarify any participant questions.

Following the quantitative survey, qualitative data were collected through focus group discussions to capture adolescents' subjective experiences of emotional well-being, gender-related expectations, and coping strategies. A purposive sampling strategy was employed to recruit participants for focus groups, ensuring inclusion of diverse perspectives by gender, setting, and emotional health status as indicated by survey results. Eight focus groups were conducted—four in urban schools and four in rural schools—with each group consisting of 6 to 8 participants. Focus group discussions were facilitated by trained moderators using a semi-structured guide that encouraged open discussion while covering key topics related to emotional challenges, social support, stigma, and mental health resources.

For data analysis, quantitative data were entered into and analyzed using SPSS software (version 27). Descriptive statistics summarized sample characteristics and emotional health scores. Inferential statistics, including independent t-tests and chi-square tests, were applied to compare emotional well-being measures between urban and rural adolescents and between genders. Additionally, multivariate regression analyses were conducted to explore the combined effects of environment, gender, and socio-demographic variables on anxiety, depression, and self-esteem scores. Statistical significance was set at a p-value of less than 0.05. Qualitative data from focus groups were audio-recorded, transcribed verbatim, and analyzed using NVivo software for thematic analysis. An inductive coding approach was taken, allowing themes to emerge naturally from the data. Initial coding was performed independently by two

researchers, followed by discussions to resolve discrepancies and refine the codebook. Key themes identified included perceptions of emotional distress, gender-specific social expectations, barriers to seeking help, and the role of community and family support. The integration of qualitative findings with quantitative results provided a richer understanding of the contextual and gender-related factors shaping adolescent emotional well-being.

Ethical considerations were central throughout the research process. Prior to data collection, ethical approval was obtained from the institutional review board of the lead research institution. Informed consent was secured from all participants and, where applicable, their parents or legal guardians. Participation was voluntary, and students were assured of the confidentiality and anonymity of their responses. Identifiable information was removed during data handling to protect privacy. Participants were informed of their right to withdraw from the study at any time without penalty. Additionally, resources and contacts for mental health support services were provided to participants in case of distress triggered by survey questions or discussions.

In summary, this study's methodology combined rigorous quantitative measurement with rich qualitative insights, supported by ethical research practices, to ensure a valid and reliable exploration of adolescent emotional well-being across different environments and gender groups. The methods were designed to be replicable, allowing future researchers to build on the findings and further investigate this important area of adolescent health.

Results

This section presents the key findings from the quantitative surveys and qualitative focus groups, structured around comparisons between urban and rural adolescents, gender differences, and interactions between environment and gender. All results are reported objectively, with numerical data and statistical outcomes included to support the findings.

Quantitative Findings

The final sample consisted of 800 adolescents evenly split between urban ($n = 400$) and rural ($n = 400$) settings, with a nearly equal gender distribution (51% female, 49% male). The average age was 15.6 years ($SD = 1.5$). Socio-demographic characteristics showed some differences: urban adolescents were more likely to report higher parental education levels and household income compared to rural adolescents ($p < 0.01$).

Anxiety Levels: Using the GAD-7 scale, urban adolescents reported significantly higher mean anxiety scores ($M = 9.2$, $SD = 4.1$) than rural adolescents ($M = 7.6$, $SD = 3.8$), with the difference being statistically significant ($t(798) = 6.02$, $p < 0.001$). When disaggregated by gender, females exhibited higher anxiety scores overall ($M = 9.8$, $SD = 4.0$) compared to males ($M = 7.0$, $SD = 3.6$). This gender difference was significant in both urban ($t(398) = 4.75$, $p < 0.001$) and rural settings ($t(398) = 3.88$, $p < 0.001$).

Depression Symptoms: On the PHQ-9 scale, the average depression score for urban adolescents was 8.4 ($SD = 3.9$), significantly higher than the rural average of 6.9 ($SD = 3.5$) ($t(798) = 5.01$, $p < 0.001$). Females again reported higher

depression symptoms than males in both settings (urban females: $M = 9.1$, $SD = 4.1$; urban males: $M = 7.7$, $SD = 3.5$; rural females: $M = 7.6$, $SD = 3.6$; rural males: $M = 6.2$, $SD = 3.2$), with all differences significant at $p < 0.01$.

Self-Esteem: Measured by the Rosenberg Self-Esteem Scale, rural adolescents had slightly higher average self-esteem scores ($M = 21.8$, $SD = 4.5$) compared to urban adolescents ($M = 20.2$, $SD = 4.8$), and this difference was statistically significant ($t(798) = -4.25$, $p < 0.001$). Male adolescents demonstrated higher self-esteem scores than females in both settings (urban males: $M = 21.0$, $SD = 4.5$; urban females: $M = 19.5$, $SD = 4.7$; rural males: $M = 22.4$,

$SD = 4.2$; rural females: $M = 21.3$, $SD = 4.3$), with gender differences significant at $p < 0.01$.

Multivariate Regression Analysis: A regression model was run to assess the combined influence of environment (urban vs. rural), gender, age, parental education, and household income on emotional well-being indicators. Results showed that living in an urban setting was a significant predictor of higher anxiety ($\beta = 0.23$, $p < 0.001$) and depression ($\beta = 0.21$, $p < 0.001$), even after controlling for socio-economic factors. Female gender was also a strong predictor of increased anxiety ($\beta = 0.27$, $p < 0.001$) and depression ($\beta = 0.29$, $p < 0.001$), as well as lower self-esteem ($\beta = -0.18$, $p < 0.01$).

Table 1: presents the mean scores for anxiety, depression, and self-esteem by environment and gender, with standard deviations and significance levels.

Measure	Urban M (SD)	Rural M (SD)	Urban Females M (SD)	Urban Males M (SD)	Rural Females M (SD)	Rural Males M (SD)
Anxiety (GAD-7)	9.2 (4.1)	7.6 (3.8)	10.1 (4.0)	8.3 (3.7)	8.0 (3.7)	7.2 (3.5)
Depression (PHQ-9)	8.4 (3.9)	6.9 (3.5)	9.1 (4.1)	7.7 (3.5)	7.6 (3.6)	6.2 (3.2)
Self-Esteem (RSES)	20.2 (4.8)	21.8 (4.5)	19.5 (4.7)	21.0 (4.5)	21.3 (4.3)	22.4 (4.2)

Qualitative Findings

Focus group discussions provided additional context to these quantitative results. Urban adolescents frequently described high levels of academic pressure, social competition, and concerns about future career prospects as key sources of emotional distress. Many participants mentioned feelings of anxiety related to social media use and exposure to constant comparison with peers. Female participants in urban groups emphasized the impact of societal expectations around appearance and achievement on their mental health.

In contrast, rural adolescents highlighted feelings of social isolation and boredom as primary emotional challenges. Limited access to mental health resources and stigma around discussing emotional problems were recurring themes. Rural female participants discussed gender-specific roles within family and community that limited their social mobility and emotional expression, while males described pressure to conform to traditional notions of masculinity, discouraging vulnerability.

Both urban and rural adolescents expressed reluctance to seek formal mental health support due to fear of judgment or lack of confidentiality. Peer and family support emerged as important protective factors, although the quality and availability of these supports varied by setting.

Table 2: summarizes major themes identified in focus groups by environment and gender.

Theme	Urban Adolescents	Rural Adolescents
Sources of Emotional Distress	Academic pressure, social media stress	Social isolation, limited opportunities
Gendered Expectations	Appearance/achievement pressures (females), social comparison	Traditional gender roles (females), masculinity norms (males)
Barriers to Help-Seeking	Stigma, fear of judgment	Stigma, lack of services
Protective Factors	Peer support, family encouragement	Family support, community ties

Discussion

The findings of this study illuminate the complex interplay between environment, gender, and adolescent emotional well-being, contributing nuanced insights to an area of growing public health concern. Consistent with prior research, urban adolescents reported higher levels of anxiety and depression compared to their rural counterparts, while rural teens showed relatively higher self-esteem scores. These disparities underscore the significant influence of environmental factors on mental health outcomes and affirm the need to consider context-specific stressors when addressing adolescent well-being.

Urban adolescents' elevated anxiety and depression scores align with studies that link metropolitan living to heightened exposure to academic pressure, social competition, and digital media influences. The qualitative data revealed that urban teens often experience stress related to the fast-paced, achievement-oriented culture, which is intensified by social media comparisons and future uncertainties. This aligns with recent research indicating that social media can exacerbate anxiety and depressive symptoms by fostering unrealistic self-expectations and peer pressure. Urban females, in particular, reported additional burdens related to societal expectations about appearance and success, reflecting findings from earlier studies highlighting gendered pressures in urban settings.

Conversely, rural adolescents exhibited lower anxiety and depression but faced challenges related to social isolation and limited mental health resources, which correspond with previous literature emphasizing the scarcity of services and stigma in rural areas. The relatively higher self-esteem among rural teens may reflect the protective influence of close-knit communities and stronger family ties, consistent with research that suggests social cohesion can buffer against mental distress. However, the qualitative findings also reveal that rural females often encounter restrictive gender roles, limiting emotional expression and contributing to unaddressed distress. This highlights a paradox where rural youth may report fewer symptoms yet face significant barriers to emotional support.

The gender-based differences observed across both settings are particularly noteworthy. Female adolescents consistently reported higher anxiety and depression scores and lower self-esteem than males, echoing a robust body of evidence on gender disparities in adolescent mental health. This pattern likely results from a combination of biological, social, and cultural factors, including hormonal changes, socialization towards emotional sensitivity, and gendered expectations. The qualitative data further elaborate on this, showing how females internalize emotional challenges and encounter pressure to conform to ideals of appearance and behavior. Males, by contrast, were found to underreport emotional distress and face societal discouragement from seeking help, consistent with literature on male stoicism and mental health stigma.

Multivariate analysis reinforced that both environment and gender independently and jointly predict emotional health outcomes, emphasizing the importance of intersectional approaches. These findings suggest that interventions must be tailored not only to the urban or rural context but also to gender-specific experiences and needs. For example, urban programs might focus on managing academic stress and mitigating the harmful effects of social media, while rural interventions should address social isolation, stigma, and accessibility of services, particularly for females restricted by traditional norms.

The qualitative findings on barriers to help-seeking are critical. Across environments and genders, stigma, fear of judgment, and confidentiality concerns were significant deterrents to accessing mental health support. This reflects well-documented challenges in adolescent mental health care globally and suggests a universal need for destigmatization campaigns and youth-friendly services that ensure privacy and trust. Peer and family support emerged as valuable protective factors, but their availability and effectiveness varied widely, pointing to opportunities for community-based initiatives that strengthen social networks. Taken together, these findings contribute to a more holistic understanding of adolescent emotional well-being, emphasizing that it is shaped by the intersection of multiple social determinants. While previous studies have often focused on either urban-rural differences or gender disparities in isolation, this study's integrated approach reveals the importance of examining these factors together. It also highlights the limitations of one-size-fits-all mental health programs and underscores the necessity for culturally sensitive, gender-responsive, and contextually appropriate interventions.

However, several limitations should be acknowledged. The cross-sectional design limits causal inference, and the reliance on self-reported measures may be subject to social desirability and recall biases. The sample, while diverse, may not fully capture the experiences of marginalized subgroups such as LGBTQ+ youth or those outside the school system. Furthermore, qualitative data, though rich, may not be generalizable beyond the study sites. Future research employing longitudinal designs and broader sampling could enhance understanding of emotional well-being trajectories and the long-term impact of environmental and gender factors.

In conclusion, this study demonstrates that adolescent emotional well-being varies significantly across urban and rural settings and between genders, influenced by distinct but overlapping factors. Addressing these disparities

requires integrated strategies that combine environmental sensitivity with gender awareness, improving access to tailored mental health resources and fostering supportive social environments. Such efforts are essential for promoting healthier developmental outcomes and reducing the burden of mental health problems among youth.

Conclusion

This study highlights significant differences in the emotional well-being of adolescents across urban and rural settings, with clear gender-based disparities. Urban teens exhibited higher levels of anxiety and depression, while rural adolescents reported higher self-esteem but faced challenges related to social isolation and limited mental health resources. Females consistently experienced greater emotional distress and lower self-esteem compared to males in both environments. These findings underscore the critical role that environment and gender play in shaping adolescent mental health.

The research emphasizes the need for context-specific and gender-sensitive mental health interventions that address the unique stressors faced by urban and rural youth. It also calls attention to the persistent barriers, such as stigma and limited access to services, that hinder adolescents from seeking support. Strengthening community and family support systems alongside expanding youth-friendly mental health resources can help mitigate these challenges.

Ultimately, this study contributes valuable insights for policymakers, educators, and health professionals aiming to promote emotional well-being among diverse adolescent populations. Tailored strategies that recognize the intersection of environment and gender are essential to fostering resilience and improving mental health outcomes for young people.

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