AATCC Review

13 May 2025: Received
29 June 2025: Revised
09 July 2025: Accepted
10 August 2025: Available Online

https://aatcc.peerjournals.net/

Original Research Article

Open Access

The Impact of Social Isolation on Mental Health Stigma and Psychological Well-being of University Students

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ABSTRACT

Background: *Social isolation and mental health stigma represent critical challenges in university settings, particularly impacting students' psychological well-being and help-seeking behaviors. Despite growing recognition of these issues, limited research has examined their interconnected relationships within Indian higher education contexts.*

Objective: *This cross-sectional study investigated the relationships between social isolation, internalized mental health stigma, psychological well-being, and attitudes toward professional help-seeking among university students.*

Methods: *A total of 140 students from G.B. Pant University of Agriculture and Technology participated in an online survey conducted between October and December, 2024. Key methodological challenges included ensuring representative sampling across diverse academic disciplines and managing potential social desirability bias in mental health reporting. Validated instruments included the UCLA Loneliness Scale-10, Internalized Stigma of Mental Illness Scale-9, WHO-5 Well-Being Index, and Attitudes Toward Seeking Professional Psychological Help Scale-Short Form. Data were analyzed using correlation and regression analyses.*

Results: *Social isolation demonstrated significant positive correlation with mental health stigma ($r = 0.499$, $p < 0.001$, 95% CI [0.24, 0.43]) and significant negative correlation with psychological well-being ($r = -0.469$, $p < 0.001$, 95% CI [-0.61, -0.32]). Regression analyses revealed that social isolation predicted 24.9% of the variance in mental health stigma ($\beta = 0.340$, $p < 0.001$) and 22.1% of variance in psychological well-being ($\beta = -0.461$, $p < 0.001$). Contrary to expectations, no significant relationship emerged between social isolation and help-seeking attitudes ($r = 0.006$, $p = 0.946$).*

Conclusions: *Findings demonstrate that social isolation significantly contributes to internalized mental health stigma and diminished psychological well-being among university students. However, isolated students do not necessarily exhibit reduced willingness to seek professional help, suggesting complex pathways in help-seeking behavior. This study contributes novel insights into the differential impacts of social isolation on various mental health dimensions and provides the first empirical examination of these relationships in Indian university contexts. Universities should implement targeted interventions addressing social connectedness and stigma reduction to enhance student mental health outcomes.*

Keywords: *social isolation, mental health stigma, university students, psychological well-being, help-seeking behavior, mental health challenges, mental health problems, academic pressures.*

Introduction

Mental health challenges among university students have reached unprecedented levels globally, with recent meta-analyses indicating that approximately 35% of students experience clinically significant symptoms of anxiety or depression [2][5]. In India, the prevalence of mental health disorders among higher education students ranges from 28% to 85%, depending on the population and assessment tools used [14]. This alarming trend necessitates a comprehensive understanding of factors contributing to student mental health deterioration and barriers to accessing appropriate support services [21].

Social isolation has emerged as a critical determinant of mental health outcomes, particularly within university contexts where students navigate complex social transitions while managing academic pressures [6]. Defined as the objective lack of social contact and meaningful relationships, social isolation differs from loneliness, which represents the subjective experience of social disconnection [17]. Research demonstrates that socially isolated individuals experience elevated cortisol levels, compromised immune function, and increased risk for depression and anxiety disorders [7][18].

Concurrent with rising isolation levels, mental health stigma continues to present formidable barriers to student well-being and help-seeking behavior. Stigma manifests through public discrimination and internalized negative self-perceptions about mental illness [11].

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DOI: https://doi.org/10.21276/AATCCReview.2025.13.03.607

Internalized stigma proves particularly detrimental, as individuals incorporate societal stereotypes into their self-concept, leading to diminished self-esteem, social withdrawal, and reluctance to pursue professional support [4][31]. Among university students, stigma correlates with delayed treatment seeking, academic impairment, and persistent psychological distress [12][30].

Despite extensive research on social isolation and stigma as independent factors, limited investigation has examined their synergistic effects on student mental health outcomes. Theoretical models suggest that isolation may amplify stigma through reduced social support and increased rumination on negative self-perceptions [19]. Conversely, internalized stigma may perpetuate isolation by discouraging social engagement and help-seeking behaviors [8]. Understanding these bidirectional relationships is essential for developing comprehensive intervention strategies.

Agricultural universities represent unique educational environments where students often transition from rural backgrounds to semi-urban academic settings, potentially experiencing heightened social adjustment challenges [23]. G.B. Pant University of Agriculture and Technology, established as India's first state agricultural university, attracts students from diverse geographical and socioeconomic backgrounds, creating an ideal context for examining social isolation and stigma dynamics.

This study addresses three primary research questions: (1) How does social isolation relate to internalized mental health stigma among university students? (2) What is the impact of social isolation on students' psychological well-being? (3) To what extent does social isolation influence attitudes toward professional help-seeking? By examining these relationships within a comprehensive theoretical framework, this research aims to inform evidence-based interventions for enhancing student mental health support systems.

Theoretical Framework

This study integrates Social Support Theory [10] and the Theory of Planned Behavior [1] to understand relationships between social isolation, stigma, well-being, and help-seeking behavior. Social Support Theory posits that social connections provide stress-buffering effects through emotional, informational, and instrumental support mechanisms. When these connections are absent or diminished, individuals become more vulnerable to psychological distress and maladaptive coping strategies [28]. In university contexts, social support networks facilitate academic adjustment, emotional regulation, and resilience development [16].

The Theory of Planned Behavior suggests that behavioral intentions result from attitudes toward the behavior, subjective norms, and perceived behavioral control [1][2]. Applied to help-seeking behavior, this framework indicates that students' willingness to pursue mental health services depends on their attitudes toward treatment, perceived social approval of help-seeking, and confidence in their ability to access and benefit from services [20]. Stigma influences all three components by fostering negative treatment attitudes, reinforcing anti-help-seeking norms, and reducing perceived control over mental health outcomes.

The integration of these theories suggests that social isolation weakens protective support mechanisms while simultaneously reinforcing stigmatized beliefs about mental illness.

This dual process increases psychological distress and creates barriers to help-seeking, potentially establishing a self-perpetuating cycle of isolation, stigma, and poor mental health outcomes. The current study tests this integrated theoretical model through empirical examination of hypothesized relationships. Fig 1 shows the conceptual framework of the study,

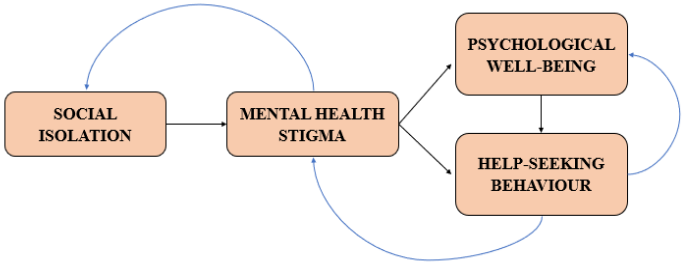

Fig 1. Conceptual Framework.

Hypotheses

Based on the theoretical framework and existing literature, three primary hypotheses were formulated:

H_1: Social isolation will be significantly positively correlated with internalized mental health stigma among university students.

H_2: Social isolation will be significantly negatively correlated with psychological well-being among university students.

H_3: Social isolation will be significantly negatively correlated with positive attitudes toward seeking professional psychological help.

Research Methodology

This cross-sectional survey study was conducted at G.B. Pant University of Agriculture and Technology (GBPUAT), Pantnagar, Uttarakhand, India, between October and December 2024. GBPUAT was selected as the study site due to its status as India's first state agricultural university, diverse student population representing various Indian states, and comprehensive academic programs spanning agriculture, veterinary sciences, technology, and basic sciences.

A convenience sampling strategy was employed to recruit university students across different academic levels and disciplines. Inclusion criteria comprised: (1) current enrolment as an undergraduate, postgraduate, or doctoral student at GBPUAT; (2) ability to read and understand English; and (4) voluntary consent to participate. No specific exclusion criteria were applied to maintain sample representativeness. Recruitment occurred through digital channels, with the survey link distributed via WhatsApp groups through class representatives across various colleges within the university. This approach ensured broad reach across different academic disciplines and student levels while maintaining anonymity and voluntary participation.

The sample size was determined using convenience sampling until reaching approximately 140 participants. This target was based on general recommendations for multiple regression analysis to ensure adequate statistical power and account for potential incomplete responses. Data collection utilized a structured online questionnaire administered through Google Forms.

The survey included an informed consent section explaining study purposes, voluntary participation, confidentiality measures, and data usage. Participants provided digital consent before accessing survey items. The questionnaire required approximately 15-20 minutes to complete.

To ensure data quality, several measures were implemented: (1) mandatory completion of all items; (2) logical consistency checks within the survey platform; (3) IP address tracking to prevent duplicate submissions; and (4) data screening for outliers and response patterns indicating random responding.

Measures

Social Isolation Social isolation was assessed using the UCLA Loneliness Scale-Version 3 (UCLA-LS3), shortened to 10 items for brevity while maintaining psychometric integrity. The UCLA-LS3 represents the gold standard for measuring subjective loneliness and social isolation in research contexts. Items are rated on a 4-point Likert scale (1 = never, 4 = often), with higher scores indicating greater loneliness. Example items include "I feel left out" and "I lack companionship." Scores range from 10-40, with established cutoffs: low loneliness (10-19), average loneliness (20-24), high loneliness (25-30), and very high loneliness (31-40). The scale demonstrates excellent reliability (α = 0.89-0.94) and construct validity across diverse populations [26].

Internalized Mental Health Stigma Internalized stigma was measured using the Internalized Stigma of Mental Illness Scale-9 (ISMI-9), a brief version of the original 29-item ISMI. The ISMI-9 assesses the degree to which individuals with mental health concerns internalize stigmatizing beliefs about mental illness. Items are rated on a 4-point Likert scale (1 = strongly disagree, 4 = strongly agree), with higher scores reflecting greater internalized stigma. Example items include "I feel inferior to others who don't have mental illness" and "Having mental illness has spoiled my life." Score interpretation follows established guidelines: minimal/no stigma (1.00-2.00), mild stigma (2.01-2.50), moderate stigma (2.51-3.00), and severe stigma (3.01-4.00). The ISMI-9 demonstrates strong psychometric properties (α = 0.86-0.91) and correlates appropriately with related constructs [4].

Psychological Well-being Psychological well-being was evaluated using the WHO-5 Well-Being Index [32], a widely used brief measure of subjective well-being. The five items assess mood, vitality, and general life satisfaction over the previous two weeks using a 6-point Likert scale (0 = at no time, 5 = all of the time). Example items include "I have felt cheerful and in good spirits" and "I have felt calm and relaxed." Raw scores are multiplied by four to provide a 0-100 scale, with higher scores indicating better well-being. Scores below 50 suggest poor well-being and potential depression screening needs, while scores above 70 indicate good well-being. The WHO-5 demonstrates strong reliability (α = 0.82-0.94) and validity across diverse populations [29].

Attitudes Toward Seeking Professional Help Help-seeking attitudes were assessed using the Attitudes Toward Seeking Professional Psychological Help Scale-Short Form (ATSPPH-SF). This 10-item scale measures willingness to seek professional psychological assistance when needed. Items are rated on a 4-point Likert scale (0 = disagree, 3 = agree), with possible scores ranging from 0-30. Higher scores indicate more positive help-seeking attitudes. Example items include "If I believed I was having a mental breakdown, my first inclination would be to get professional attention" and "I would want to get psychological help if I were worried or upset for a long period of time." The ATSPPH-SF demonstrates adequate reliability (α = 0.82-0.84) and predictive validity for actual help-seeking behavior [13].

Data Analysis

Statistical analyses were conducted using Microsoft Excel with supplementary calculations performed manually for advanced statistics. Descriptive statistics, including means, standard deviations, frequencies, and percentages were calculated for all variables. Data distribution normality was assessed through skewness and kurtosis statistics and visual inspection of histograms. Pearson product-moment correlations examined bivariate relationships between study variables. Effect sizes for correlations were interpreted using Cohen's conventions: small (r = 0.10), medium (r = 0.30), and large (r = 0.50). Simple linear regression analyses tested each hypothesis, with social isolation serving as the predictor variable and stigma, well-being, and help-seeking attitudes as separate outcome variables. For regression analyses, standardized beta coefficients, R-squared values, and 95% confidence intervals were calculated. Statistical significance was set at α = 0.05 for all analyses. Effect sizes for regression analyses were interpreted using Cohen's conventions for f^2: small (0.02), medium (0.15), and large (0.35).

Results

Participant Characteristics

A total of 140 university students participated in the study. Table 1 presents comprehensive demographic characteristics and scale score distributions. The sample comprised predominantly young adults under 24 years (62.9%), with strong female representation (68.6%). Educational levels were distributed across undergraduate (52.1%), postgraduate (21.4%), and doctoral (26.4%) students, with the majority (77.9%) enrolled in the College of Agriculture.

Category	Subcategory	Frequency	Percentage (%)
Age	Young (<24 years)	88	62.86
	Emerging Adults (24-30 years)	51	36.43
	Mature Adults (>30 years)	1	0.71
Sex	Female	96	68.57
	Male	44	31.43
Degree	UG	73	52.14
	PG	30	21.43
	Ph.D.	37	26.43
College	College of Agriculture	109	77.86
	C.B.S.H.	7	5.00
	College of Community Sciences	7	5.00
	C.A.B.M.	1	0.71
	College of Technology	10	7.14
	College of Veterinary & Animal Sciences	6	4.29

Social Isolation	Low (<20)	34	24.29
	Average (20-24)	46	32.86
	High (25-30)	44	31.43
	Very High (>30)	16	11.43
Internalized MentalHealth Stigma	Minimal to no internalized stigma (1.00-2.00)	79	56.43
	Mild internalized stigma (2.01-2.50)	42	30.00
	Moderate internalized stigma (2.51-3.00)	18	12.86
	Severe internalized stigma (3.01-4.00)	1	0.71
Well-Being (WHO scale)	Low (0-50)	39	27.86
	Medium (51-70)	46	32.86
	High (>70)	55	39.29
Attitude Towards Seeking Help	Low (0-10)	18	12.86
	Moderate (11-20)	108	77.14
	High (21-30)	14	10.00

Descriptive Statistics and Scale Reliability

Social isolation scores averaged 23.33 (SD = 5.86), indicating moderate levelswithin the sample. Mental health stigma scores were relatively low (M = 1.99, SD = 0.44), suggesting minimal to mild internalized stigma among participants. Psychological well-being scores averaged 22.91 (SD = 19.96), falling within the medium well-being range. Help-seeking attitude scores averaged 15.11 (SD = 4.83), indicating moderate positive attitudes toward professional psychological help.

All scales demonstrated acceptable to excellent internal consistency reliability: UCLA Loneliness Scale (α = 0.88), ISMI-9 (α = 0.85), WHO-5 Well-Being Index (α = 0.91), and ATSPPH-SF (α = 0.83).

Hypothesis Testing

Hypothesis 1: Social Isolation and Mental Health Stigma

Pearson correlation analysis revealed a significant positive relationship between social isolation and internalized mental health stigma ($r = 0.499$, $p < 0.001$, 95% CI [0.24, 0.43]), representing a large effect size. Simple linear regression analysis confirmed that social isolation significantly predicted mental health stigma, $F(1, 138) = 45.79$, $p < 0.001$, $R^2 = 0.249$, adjusted $R^2 = 0.244$. The standardized regression coefficient indicated that a one-unit increase in social isolation score was associated with a 0.34-point increase in mental health stigma score ($\beta = 0.340$, $p < 0.001$, 95% CI [0.24, 0.43]). These findings provide strong support for Hypothesis 1.

Hypothesis 2: Social Isolation and Psychological Well-being

Social isolation demonstrated a significant negative correlation with psychological well-being ($r = -0.469$, $p < 0.001$, 95% CI [-0.61, -0.32]), representing a large effect size. Linear regression analysis confirmed that social isolation significantly predicted psychological well-being, $F(1, 138) = 39.06$, $p< 0.001$, $R^2 = 0.221$, adjusted $R^2 = 0.215$. Higher levels of social isolation were associated with lower psychological well-being ($\beta = -0.461$, $p < 0.001$, 95% CI [-0.61, -0.32]). These results strongly support Hypothesis 2.

Hypothesis 3: Social Isolation and Help-seeking Attitudes

Contrary to expectations, social isolation showed no significant correlation with attitudes toward seeking professional psychological help ($r = 0.006$, $p = 0.946$, 95% CI [-0.13, 0.14]). The effect size was negligible, and linear regression analysis confirmed the absence of a predictive relationship, $F(1, 138) = 0.005$, $p = 0.946$, $R^2 < 0.001$. Social isolation did not significantly predict help-seeking attitudes ($\beta = 0.005$, $p = 0.946$, 95% CI [-0.13, 0.14]). Hypothesis 3 was not supported.

Discussion

Social Isolation and Mental Health Stigma

The strong positive correlation between social isolation and internalized mental health stigma ($r = 0.50$) supports theoretical predictions and extends previous research in several important ways. This relationship suggests that socially isolated students are more likely to internalize negative societal beliefs about mental illness, potentially creating a self-reinforcing cycle of stigma and withdrawal. The magnitude of this association (large effect size) indicates that social isolation represents a significant risk factor for stigma development.

These findings align with Social Support Theory, which suggests that meaningful social connections provide corrective information and emotional validation that counteract stigmatizing beliefs [10]. When students lack these protective relationships, they may be more susceptible to internalizing negative stereotypes about mental health challenges. Additionally, isolated students may engage in increased rumination and catastrophic thinking, processes known to amplify self-stigmatizing beliefs [22].

The current results extend previous research by demonstrating this relationship within an Indian university context, where cultural factors may influence both isolation experiences and stigma manifestation. Agricultural university students may face unique challenges, including transitions from rural to semi-urban environments and career uncertainties, potentially amplifying vulnerability to both isolation and stigma [24].

Social Isolation and Psychological Well-being

The significant negative relationship between social isolation and psychological well-being ($r = -0.47$) confirms extensive literature demonstrating the detrimental effects of loneliness on mental health outcomes. This large effect size suggests that social connections represent fundamental determinants of student well-being, consistent with human needs for belonging and social integration [3].

The current findings are particularly noteworthy given the WHO-5 Well-Being Index's focus on positive mental health indicators rather than psychopathology symptoms. This suggests that social isolation not only increases risk for mental health disorders but also diminishes positive aspects of psychological functioning, including vitality, life satisfaction, and emotional stability. Such comprehensive effects underscore the importance of addressing isolation as a public health priority within university settings.

The relationship between isolation and well-being likely involves multiple pathways. Socially isolated students may experience chronic stress activation, sleep disturbances, and reduced engagement in health-promoting behaviors [15]. Additionally, isolation limits access to emotional support,

problem-solving assistance, and positive social experiences that contribute to resilience and life satisfaction [28].

Social Isolation and Help-seeking Attitudes

The absence of a significant relationship between social isolation and help-seeking attitudes represents the most surprising finding of this study. This null result contradicts theoretical predictions and previous research suggesting that isolated individuals experience greater barriers to accessing mental health services [9]. Several explanations may account for this unexpected finding.

First, help-seeking attitudes may be influenced more strongly by individual difference factors (e.g., personality, previous therapy experiences) than by current social circumstances. Research suggests that help-seeking intentions involve complex decision-making processes incorporating multiple cognitive and emotional factors beyond immediate social context [25].

Second, university environments may provide institutional support structures that partially compensate for individual social isolation. Students may maintain positive attitudes toward professional help even when experiencing personal loneliness, particularly if campus mental health services are well-promoted and accessible. The current sample's moderate help-seeking attitude scores suggest general openness to professional support despite varying isolation levels.

Third, cultural factors specific to Indian contexts may influence help-seeking attitudes independently of social isolation. Traditional family structures and collectivistic values may shape help-seeking beliefs through mechanisms distinct from peer social connections [27]. Students may view professional help as acceptable or necessary regardless of their current social integration status.

Finally, the relationship between isolation and help-seeking may be mediated by other variables not examined in this study. For instance, internalized stigma (which was significantly correlated with both isolation and help-seeking attitudes) may represent the primary pathway through which isolation influences help-seeking behavior, rather than operating as a direct relationship.

Implications for Theory and Practice

These findings have several important implications for theoretical understanding and practical interventions. From a theoretical perspective, the results support integrated models emphasizing the interconnected nature of social, cognitive, and emotional factors in mental health outcomes. The strong relationships between isolation, stigma, and well-being suggest that comprehensive intervention approaches addressing multiple domains simultaneously may be more effective than single-factor interventions.

Practically, universities should prioritize social connection building as a fundamental component of mental health promotion strategies. Interventions might include peer mentorship programs, social skills training, group-based activities, and community-building initiatives specifically designed to reduce isolation among at-risk students. Given the agricultural university context, programming could incorporate discipline-specific social activities and career development opportunities that simultaneously address academic and social needs.

Stigma reduction efforts should also be prioritized, particularly among socially isolated students who may be most vulnerable to internalizing negative beliefs. Anti-stigma campaigns, mental health literacy programs, and contact-based interventions involving individuals with lived mental health experiences could help counteract stigmatizing attitudes [11].

The null relationship between isolation and help-seeking attitudes suggests that the promotion of mental health services should not assume that isolated students are necessarily resistant to professional help. Instead, outreach efforts should focus on practical barriers (e.g., accessibility, affordability, cultural competence) while maintaining broad-based promotion strategies that reach students across different social integration levels.

Limitations and Future Directions

Several limitations should be acknowledged when interpreting these findings. First, the cross-sectional design prevents causal inferences about relationships between study variables. Longitudinal research is needed to examine how isolation, stigma, and well-being influence each other over time and to identify critical intervention points.

Second, the convenience sampling approach and focus on a single university limit generalizability to other student populations and educational contexts. Future research should examine these relationships across multiple institutions, including non-agricultural universities and different geographical regions within India.

Third, reliance on self-report measures introduces potential response bias, particularly for sensitive topics like mental health stigma. Future studies could incorporate behavioural measures, peer ratings, or physiological indicators to complement self-report data.

Fourth, the study did not examine potential mediating or moderating variables that could clarify the mechanisms underlying observed relationships. Future research should investigate factors such as coping strategies, social skills, cultural identity, and previous mental health experiences as potential moderators or mediators.

Finally, the null relationship between isolation and help-seeking attitudes warrants further investigation through qualitative research methods. In-depth interviews or focus groups could provide a nuanced understanding of how students make decisions about seeking professional help and what factors influence these processes beyond quantitative survey responses.

Future research directions include: (1) longitudinal studies tracking isolation, stigma, and well-being changes throughout university enrolment; (2) intervention studies testing social connection and stigma reduction programs; (3) cross-cultural comparisons examining how relationships vary across different cultural contexts; (4) mixed-methods investigations combining quantitative and qualitative approaches; and (5) examination of specific populations (e.g., international students, first-generation college students) who may be at heightened risk for isolation and stigma.

Conclusion

This study demonstrates significant relationships between social isolation, internalized mental health stigma, and psychological well-being among Indian university students, while revealing complex patterns in help-seeking attitudes. The findings underscore the importance of addressing social isolation as a critical determinant of student mental health outcomes and highlight the need for comprehensive

intervention approaches that simultaneously target multiple risk factors.

Universities should prioritize the development of evidence-based programs that foster social connections, reduce mental health stigma, and promote positive well-being among students. Such efforts require coordination across multiple institutional levels, including academic departments, student services, residential life, and campus mental health centres.

The unexpected null relationship between isolation and help-seeking attitudes suggests that assumptions about barriers to mental health service utilization may be more complex than previously recognized. This finding emphasizes the need for continued research examining the multifaceted nature of help-seeking behavior and the development of nuanced intervention strategies that address diverse student needs and preferences.

Ultimately, addressing the mental health crisis among university students requires a comprehensive understanding of the social, psychological, and cultural factors that influence student well-being. This study contributes to that understanding while highlighting important directions for future research and intervention development. By fostering socially connected, stigma-free campus environments, universities can better support student mental health and academic success.

Ethical Considerations

Ethical principles were strictly adhered to throughout the study. Participants provided informed consent through the online survey platform, with clear explanations of study purposes, voluntary participation, confidentiality measures, and rights to withdraw. No personally identifying information was collected, ensuring participant anonymity. Data were stored securely with access limited to research team members.

Conflict of Interest:

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgment of Funding:

Funds used from first author's fellowship grant for data collection, analysis etc.

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