



## Perceived Stress, Intolerance of Uncertainty, and Mental Well-being among International Students

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**Abstract:** This study explores how perceived stress and intolerance of uncertainty relate to mental well-being among international scholars in India, while also considering the impact of sociodemographic variables. A sample of 200 participants was selected using a stratified sampling approach to ensure accessibility. The study utilized three standardized instruments: the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) to evaluate strenuous situations, the Intolerance of Uncertainty Scale (Freeston et al., 1994) considers how individuals respond to uncertain or ambiguous situations, and the Warwick-Edinburgh Mental Well-being Scale (Stewart-Brown et al., 2006) focuses on psychological well-being. With a cross-sectional quantitative approach, the data were subjected to correlational analysis, independent samples t-tests, and stepwise regression to determine the predictive and group difference factors concerning stress and well-being. It seems that outcomes are strongly mediated by perceived stress and that intolerance elevates stress among international students. Strengthening resilience while reducing anticipatory anxiety and culturally responsive mental health support is recommended. Mechanisms of causality enhancing the international student adjustment and mental well-being pathways need investigation in longitudinal studies.

**Keywords:** *Perceived Stress, Intolerance of Uncertainty, Mental Wellbeing, And International Students.*

## 1. Introduction

Perceived stress is how a person interprets and assesses the pressure they feel when dealing with everyday difficulties (Cohen & Williamson, 1988). The concept of perceived stress originates from the broader field of stress research, which was significantly influenced by the early work of Hans Selye (1936). According to the Cognitive Avoidance Theory of Worry (CATW), worry is a coping strategy for individuals with a high intolerance of uncertainty who seek to prevent emotional discomfort related to uncertain situations (Dugas et al., 2001). Foreign students are frequently under considerable stress for multiple reasons. This study aims to provide useful recommendations for university members, mental health professionals, and policymakers.

The increasing attention to mental health problems among international students has led to interest in the type of predictors or factors that contribute to psychological well-being (Forbes-Mewett & Sawyer, 2016). Moving to a foreign country for study is filled with uncertainties and challenges, such as academic and cultural challenges, financial stress, and professional insecurity, and may contribute to poor mental health outcomes (Cohen et al., 1983). In addition, mental health stigma is common in many cultural groups may prevent students from seeking professional help (Hyun et al., 2007), and the problem of unrelenting stress goes unaddressed, harming both educational attainment and personal life. Policy suggestions are that immigration policies be reconsidered and career and transitional support be tailored (Marginson, 2012; Sherry et al., 2010).

There is a lot of evidence that shows perceived stress can harm students' mental health and general performance. It has been found that being under a lot of stress can result in increased depressive feelings, worried thoughts, and sleep quality problems. As a result of their study, they found that facing more stress in school and life may bring about depression, less satisfaction with life, and poor sleep (Lee and Jang, 2023). As well as being upsetting to students, this situation leads to poor schoolwork. Handling stress well seems to have a major impact on a person's mental health. As mentioned by Yang et al. (2021), using adaptive ways to cope and being more resilient allows individuals to withstand the psychological strains of stress.

There are many challenges that students at universities deal with in different domains, all adding to their levels of stress. Trying to manage heavy academic assignments and routine tests with strict deadlines is a common part of college life. As a result of these added duties, their

emotional health can suffer and push them closer to mental problems. Trying to keep up and compete in school often leads to higher levels of stress among students. The pressure to do well and measure themselves against others often leads to extreme anxiety, which could result in the students getting burned out as they want to meet these high expectations (Hussien et al., 2022).

To make sure stress levels are understood correctly, researchers often turn to standardized questionnaires. Out of many different tools, the PSS is one of the tools most often used, as it gives a reliable way to measure a person's subjective experience of stress. Many people appreciate the PSS because it stays the same and reflects how people think about stress in their regular routines, especially in school (Cohen et al., 1983; Schneider et al., 2022). However, despite its popularity, recently, some scholars have argued for building more specific and culturally aware assessment tools. They should take into account the special factors in society and the environment that affect stress in students. These tools would improve the accuracy and suitability of stress assessments in a range of school situations.

It has been found that those with a higher IU tend to report having more psychological problems, such as increased worry, general anxiety, and feelings of depression. Rettie and Daniels (2021) found that those with higher intolerance of uncertainty felt increased anxiety and stress whenever situations were uncertain, like during the Coronavirus pandemic. Having unpredictable school results and a future in doubt can bring out IU, making it harder for students to cope with the demands of school and working life. Scholars who dislike uncertainty may resort to procrastinating, not picking up duties, and often looking for others to assure them a lot. By using these techniques for comfort, students momentarily do better, yet end up trapped in a cycle of fear and choosing not to participate. Birrell et al. (2011) explain that it makes people look to others' opinions too much and takes longer for them to learn to take care of their feelings. Moreover, Freeston et al. (2020) highlight that students involved in IU develop the habit of thinking again and again about outcomes like exams or their academic ratings. As a result of the pattern, teens feel less emotionally healthy and usually participate less in school as well as perform less well.

The way IU styles are received depends on students' cultural backgrounds. International students often find it more difficult to get used to a new place and education system. Having to deal with language differences, difficult visa requirements, and odd patterns of social behavior makes them more afraid of the unknown. Mokgele and Rothmann (2022) suggest that these types

of experiences can strongly increase IU, resulting in greater difficulties in acculturating and adapting to school. Along the same lines, a study by Moscardino (2021) and others found that female students and those coming from disadvantaged communities tend to have higher IU levels, possibly because they face more resource difficulties and widespread challenges in their everyday lives. These findings prove that IU is both a mental trait and something that gets formed by the environment and culture students are part of.

Pham et al. (2023) discovered that strong social support, as well as developing strong emotional control, helps students maintain strong mental and physical health. With both sorts of help, students can deal with the unknown, solve problems at school, and stay motivated even when things get tough. Similarly, Diener et al. (2017) said that how students think about their happiness and well-being can affect how interested they are in their studies and how well they do. The takeaway is to not only support people who have mental illness but also work on making sure everyone feels good mentally by offering daily help and words of support. Supporting students' mental health largely depends on their being resilient, self-assured, well-networked, and able to handle issues positively. According to Pham et al. (2023), those who feel they can handle their emotions and can rely on friends or family are more likely to adjust well and feel stronger psychologically, even when encountering difficulties. In addition, Diener et al. (2017) mentioned that satisfaction with life helps people become motivated, persistent, and successful in school. For this reason, educational institutions are encouraged to put greater effort into helping and managing the mental health of their students.

Research has shown that perceived stress and uneasiness with uncertain situations are closely linked to a university scholar's mental and academic well-being. Some things in life, like individual, cultural, and environmental factors, can lower a student's mental health and how they perform in school. An increasing number of students have IU, which leads to feelings of anxiety, depression, and making effortless choices in insecure learning settings. Things such as your abilities, your school environment, and the resources the school provides all affect your mental health. Some ways colleges can tackle these issues are by providing easy-to-reach counseling services, linking students to peer mentors, and implementing inclusive policies everywhere on campus. Helping students learn how to handle their emotions and behavior allows them to address stress and face uncertain situations. They are both important in helping students face and

overcome challenges. A good and helpful learning environment leads to better grades and better progress in life (Carleton, 2016).

The investigation examines whether stress and discomfort with not knowing affect how well scholars from other countries do in school. Based on the framework of the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), it hypothesizes that more intense experiences of stress and difficulty coping with unpredictability are connected to a lower amount of mental well-being among international students. Additionally, sociodemographic factors are expected to influence the degree of stress, difficulty coping with unpredictability, and well-being. To study associations, group differences, and leading factors, the research uses a cross-sectional quantitative design, including correlational analysis, t-tests, and one-way ANOVA.

## **2. Methodology**

### **2.1 Sample**

The research involved a total of 200 participants aged 18 and above, equally divided by gender (100 males and 100 females). The number of participants was selected to ensure the study could reliably identify moderate patterns or relationships. The design prioritized both practicality and data robustness.

#### **2.1.1 Inclusion Criteria**

To ensure demographic diversity and fair representation, the sample comprised 200 international scholars.

- **Gender Representation**

100 male scholars

100 female scholars

- **Educational Level**

Enrolled in postgraduate programs (Master's or PhD)

- **Cultural and Regional Background**

100 scholars from African countries

100 scholars from Asian countries

**Gender split within each group:**

50 African males and 50 African females

50 Asian males and 50 Asian females

### ***2.1.2 Exclusion Criteria***

Participants were excluded if they:

- Were under the age of 18
- Did not identify within the male/female gender binary used in this study
- Declined to provide informed consent
- Were not enrolled in a formal educational institution.

### ***2.2 Sampling Procedure***

A stratified sampling technique was used to maintain proportional representation based on gender, academic level, and regional origin. Scholars were drawn from educational institutions in Tricity, India, ensuring an even distribution across the four demographic categories: 50 Asian males, 50 Asian females, 50 African males, and 50 African females. Nearly all individuals invited to participate accepted, minimizing concerns about self-selection bias. Ethical clearance was secured through institutional review boards, and all procedures conformed to established research ethics. Scholars were briefed on the study's aims, gave written consent, and were guaranteed anonymity and confidentiality. No ethical or safety issues emerged during the data collection process.

### ***2.3 Data Collection***

Information was gathered using self-administered questionnaires provided to participants in various campus settings such as libraries, dormitories, lounges, and academic halls. Physical copies of the questionnaire were distributed, and participants were briefed on confidentiality to promote openness in their responses. The survey collected data on several dimensions:

- Perceived stress
- Intolerance of uncertainty
- Mental well-being
- Sociodemographic details (e.g., age, gender, program level, and country region)

Completed questionnaires were checked for accuracy and completeness before being organized and input into statistical tools for further examination.

### ***2.4 Instruments Used***

- ***Perceived Stress Scale (PSS)***: Cohen, Kamarck, and Mermelstein's (1983) 10-item questionnaire is used to find out how individuals feel about themselves emotionally. The responses are scored with points from 0, meaning it never happens, to 4 if it happens

often. It is well established that the items in the PSS tend to consistently measure the same concept with high reliability (above 0.70).

- ***Intolerance of Uncertainty Scale (IUS)***: Freeston et al. came up with it in 1994 as a 27-item way to see how people respond to uncertainty or ambiguous events. There are five response choices on the scale, with 1 meaning “Not at all characteristic of me” and 5 illustrating “Entirely characteristic of me.” This measure has consistently shown high internal consistency and strong construct validity in previous research (Freeston et al., 1994).
- ***Warwick-Edinburgh Mental Well-being Scale (WEMWBS)***: Founded by Stewart-Brown et al. (2006), this 14-item measure assesses positive mental health, including both psychological functioning and emotional well-being. It employs a 5-point scale (1 = none of the time to 5 = all of the time) and has shown strong reliability, with Cronbach’s alpha values surpassing 0.85.

### 2.5 Statistical Analysis

To analyze the collected data in line with the study’s objectives, descriptive statistics (mean, standard deviation), inferential tests (t-tests), and correlational techniques (Pearson’s correlation and stepwise regression) were used to explore relationships, group differences, and significant predictors of mental well-being and perceived stress

## 3. Results And Discussion

**Table 1:** *Descriptive Statistics for Study Variables (N=200)*

| Variable                | M     | SD   | Min  | Max  |
|-------------------------|-------|------|------|------|
| Mental Well-being (MWB) | 48.40 | 7.23 | 33.0 | 68.0 |
| Intolerance Factor 1    | 42.77 | 9.88 | 20.0 | 65.0 |
| Intolerance Factor 2    | 38.13 | 8.43 | 15.0 | 57.0 |
| Perceived Stress        | 20.72 | 5.87 | 6.0  | 39.0 |

Participants reported moderate levels of mental well-being ( $M = 48.40$ ) and perceived stress ( $M = 20.72$ ). Levels of intolerance of uncertainty were somewhat high, particularly for Factor 1 (anticipatory anxiety).

**Table 2:** *Pearson Correlations among Key Variables*

| Variable | 1 | 2 | 3 | 4 |
|----------|---|---|---|---|
| MWB      | — |   |   |   |

|                                       |         |        |        |   |
|---------------------------------------|---------|--------|--------|---|
| Intolerance 1                         | -.240** | —      |        |   |
| Intolerance 2                         | -.203** | .673** | —      |   |
| Perceived Stress                      | -.305** | .318** | .366** | — |
| <i>Note. <math>p &lt; .01</math>.</i> |         |        |        |   |

Mental well-being was negatively correlated with intolerance of uncertainty (both factors) and perceived stress. The strongest negative correlation was between mental well-being and perceived stress ( $r = -.305$ ,  $p < .01$ ), indicating that higher stress is associated with lower mental well-being. Additionally, intolerance of uncertainty, particularly Factor 2 (inhibitory anxiety), was positively associated with perceived stress ( $r = .366$ ,  $p < .01$ )

**Table 3:** Independent Samples t-Test by Level of Education

| Variable         | t      | df  | p    | M (UG) | M (PG) |
|------------------|--------|-----|------|--------|--------|
| MWB              | 0.189  | 198 | .851 | 48.45  | 48.22  |
| Intolerance 1    | 0.618  | 198 | .538 | 43.01  | 41.98  |
| Intolerance 2    | 0.094  | 198 | .925 | 38.16  | 38.02  |
| Perceived Stress | -1.380 | 198 | .169 | 20.40  | 21.76  |

An independent samples t-test was done to compare undergraduate and postgraduate students on mental well-being, intolerance of uncertainty (two factors), and perceived stress. The results revealed no statistically significant differences between the groups across all variables. Mental well-being scores were nearly identical (UG:  $M = 48.45$ , PG:  $M = 48.22$ ), and both factors of intolerance of uncertainty also showed minimal differences (Factor 1:  $p = .538$ ; Factor 2:  $p = .925$ ). While postgraduates reported slightly higher perceived stress ( $M = 21.76$ ) than undergraduates ( $M = 20.40$ ), the difference was not significant ( $p = .169$ ). These results suggest that educational level does not significantly influence students' mental well-being, stress levels, or intolerance of uncertainty in this sample.

**Table 4:** ANOVA Summary for Mean Differences by Student Group ( $N = 200$ )

| Variable         | F    | df (between, within) | p      |
|------------------|------|----------------------|--------|
| MWB              | 1.07 | (3, 196)             | .365   |
| Intolerance 1    | 6.15 | (3, 196)             | .001** |
| Intolerance 2    | 2.62 | (3, 196)             | .052   |
| Perceived Stress | 1.05 | (3, 196)             | .373   |

*Note.  $p < .01$ .*

An independent samples t-test revealed a statistically meaningful gender variation in intolerance of uncertainty (Factor 1), with male students ( $M = 45.13$ ) scoring higher than female students ( $M = 40.50$ ),  $t(198) = -3.40$ ,  $p = .001$ . No significant gender differences were found for

perceived stress or mental well-being. Similarly, t-tests showed no significant differences between undergraduate and postgraduate students on any variable.

The one-way ANOVA revealed statistically meaningful group distinctions in intolerance of uncertainty (Factor 1),  $F(3, 196) = 6.15, p = .001$ , revealing that Asian male students scored significantly higher than African female students. No meaningful group discrepancies were seen for perceived stress or mental well-being.

The current research examined the associations among intolerance of uncertainty, experienced stress, and mental health among international students in India, grounded in the Transactional Model of Stress and Coping. Findings demonstrated that increased difficulty coping with the unknown was linked with higher perceived stress and lower mental well-being, supporting the model's emphasis on cognitive appraisals in stress responses. The most significant part of the results showed that perceived stress strongly influenced how mentally well international students felt. The study found that, among Asian males, male students experienced more anxiety toward unknown and uncertain situations. This conclusion was also supported by qualitative data, which suggests that Asian students feel a lot of stress and shame when it comes to mental health support.

Racial discrimination and having unstable housing made things difficult for African students and often left them feeling cut off from society. Still, the differences seen in challenges did not cause much of a change in perceived stress, suggesting either resilience or other coping methods in the group. The main pressures that groups encountered included adjusting to a new culture, finding it difficult to understand English, living on a little income, and being disappointed by the level of institutional support. Since there isn't much difference in their experiences, it seems that both groups of students have similar sources of stress.

On the whole, these findings emphasize that better managing uncertainty, offering cultural help in mental health services, and cutting down on barriers in the system would greatly help international students. Teaching resilience and focusing on making the campus more inclusive could help students handle stress and feel better mentally.

#### **4. Conclusion**

This research examined the relationships among perceived stress, intolerance of uncertainty, and mental well-being among international scholars in India within the

Transactional Model of Stress and Coping framework. Findings indicated that greater intolerance of uncertainty and higher perceived stress was significantly associated with lower mental well-being, with perceived stress demonstrating the strongest association. Gender and cultural differences were evident, as male students, particularly those from Asian backgrounds, reported greater intolerance of uncertainty. Although the study's cross-sectional nature and dependence on self-reported data limit the ability to draw firm conclusions about cause and effect, the findings highlight the need to address uncertainty-related stress when developing mental health support programs. Future studies are encouraged to use longitudinal designs and behavioral research methods to better understand the direction and mechanisms of these relationships and to create more effective support systems for international students.

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