

Intolerance of Uncertainty and Psychological Distress among Emerging Adults

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Abstract: *This study examined the association between intolerance of uncertainty and psychological distress among emerging adults aged 18–29 years. A quantitative, cross-sectional correlational design was used with online convenience sampling. Of 181 survey submissions, one record was excluded because age was missing and one because the respondent was aged 17 years; a further 18 respondents who reported a previous mental-health diagnosis were excluded. The final analytical sample comprised 161 participants (M age = 23.60, SD = 3.09; 67.1% women). Intolerance of uncertainty was measured with the 12-item Intolerance of Uncertainty Scale (IUS-12), and nonspecific psychological distress with the Kessler Psychological Distress Scale (K10). Mean IUS-12 and K10 scores were 32.11 (SD = 9.44) and 24.31 (SD = 8.09), respectively. Internal consistency estimates were .887 and .913. Pearson's correlation indicated a positive association between IUS-12 and K10 scores, $r(159) = .632$, $p < .001$, 95% CI [.529, .717]. Spearman's correlation was also positive and significant ($r_s = .595$, $p < .001$, 95% bootstrap CI [.475, .699]). Higher intolerance of uncertainty was associated with greater self-reported psychological distress in this sample. The cross-sectional design, convenience sampling, self-report measures, and diagnosis-based screening limit causal inference and generalisability.*

Keywords: intolerance of uncertainty; psychological distress; emerging adults; IUS-12; K10

1. Introduction

Uncertainty is a routine feature of life, particularly during educational, occupational, relational, and personal transitions. Individuals differ in their responses to situations whose outcomes are unclear. Intolerance of uncertainty (IU) refers to difficulty accepting uncertainty and the possibility of negative outcomes. It has been examined as a cognitive vulnerability associated with worry and anxiety-related difficulties [1,2]. The IUS-12 was developed as a brief measure of IU and has demonstrated useful psychometric properties in research on responses to uncertainty [3].

Review evidence indicates that IU is associated with symptoms of generalized anxiety, depression, and obsessive-compulsive difficulties [4]. IU has also been discussed as a transdiagnostic construct relevant to anxiety-related problems [5]. These findings provide a rationale for examining IU in relation to nonspecific psychological distress, while recognising that distress is not equivalent to any single diagnosis.

Emerging adulthood, commonly described as the period from the late teens through the twenties, can involve changes in education, employment, independence, and social roles [6]. Prior research has examined IU in relation to psychological distress among medical students [7] and among college students during the COVID-19 pandemic [8]. Indian research has also examined IU alongside career indecision and mental well-being among emerging adults [9]. However, these studies differ in population, context, and outcome measures; further evidence using a general distress measure in a non-clinical emerging-adult sample may be useful.

The Kessler Psychological Distress Scale (K10) measures nonspecific distress through self-reported experiences such as nervousness, hopelessness, restlessness, and depressive feelings [10]. It does not separately measure depression,

anxiety, and stress, and it does not independently establish a clinical diagnosis. The present study therefore examined the association between IUS-12 and K10 total scores among emerging adults aged 18–29 years. The null hypothesis was that there would be no statistically significant relationship between the two total scores.

2. Literature Survey

Foundational work conceptualised IU as a factor relevant to excessive worry and emotional difficulty, and subsequent measurement research produced a shorter 12-item scale for assessing individual differences in IU [1–3]. A meta-analysis found associations between IU and symptoms associated with generalized anxiety disorder, major depressive disorder, and obsessive-compulsive disorder [4]. This literature supports investigating IU beyond a single symptom domain, but does not imply that IU causes all forms of distress.

Empirical research in student populations provides related evidence. Lally and Cantillon reported that medical students with psychological distress had higher IU scores than students without distress [7]. Varghese and Delariarte examined IU and psychological distress among college students during the pandemic using IUS-12 and DASS-21 [8]. In an Indian emerging-adult sample, Ranganathan and colleagues examined IU alongside career indecision and mental well-being, providing context for the relevance of uncertainty during this developmental period [9]. These studies do not exactly duplicate the present design: their samples, historical context, and/or outcome measures differ. The current study adds a sample-specific examination of IU and nonspecific distress measured with K10 among participants aged 18–29 who reported no previous mental-health diagnosis on the study screening item.

3. Problem Definition

The study addressed the following question: Is intolerance of uncertainty associated with nonspecific psychological distress among non-clinical emerging adults aged 18–29 years? The study tested the null hypothesis that there would be no statistically significant relationship between IUS-12 and K10 total scores.

4. Methodology/ Approach

4.1 Design and participants

A quantitative, cross-sectional correlational design was used. Data were collected through an online questionnaire using convenience sampling. The response spreadsheet contained 181 submitted records. Two records were excluded before diagnosis-based screening: one had no valid age value and one reported an age of 17 years. The remaining 179 records were within the specified age range of 18–29 years. Eighteen respondents answered “Yes” to the question asking whether they had ever been diagnosed with a mental-health condition by a qualified mental-health professional and were excluded in accordance with the study’s screening rule. The final analytical sample comprised 161 participants who reported no previous diagnosis on that item. The screening question measured self-reported history of diagnosis; it did not assess current treatment status or constitute a clinical assessment.

The final sample included 108 women (67.1%) and 53 men (32.9%). Mean age was 23.60 years ($SD = 3.09$; range = 18–29). Participation was voluntary, and respondents indicated agreement to the study information before proceeding.

4.2 Measures

Intolerance of uncertainty was measured using the 12-item Intolerance of Uncertainty Scale (IUS-12) [3]. Items were scored from 1 (not at all characteristic of me) to 5 (entirely characteristic of me); higher total scores indicate greater IU. In this sample, scores ranged from 12 to 60.

Nonspecific psychological distress was measured using the Kessler Psychological Distress Scale (K10) [10]. Participants reported how often they experienced the listed feelings during the previous four weeks, using response options from 1 (none of the time) to 5 (all of the time). Higher total scores indicate greater reported distress. Scores ranged from 10 to 50.

4.3 Procedure and statistical analysis

Participants completed the online questionnaire after reading the study information and indicating consent. Eligibility screening and demographic questions preceded the IUS-12 and K10. Descriptive statistics were calculated for age and scale scores. Internal consistency was estimated using Cronbach’s alpha. Shapiro–Wilk tests were used to examine the distributions of total scores. Pearson’s product–moment correlation was the planned analysis of the association between IUS-12 and K10 scores; Spearman’s rank-order correlation was also calculated as a sensitivity analysis.

Tests were two-tailed, with statistical significance set at $p < .05$.

5. Results and Discussion

The final analytical sample comprised 161 participants. Mean age was 23.60 years ($SD = 3.09$). The IUS-12 mean was 32.11 ($SD = 9.44$), and the K10 mean was 24.31 ($SD = 8.09$). Internal consistency was .887 for the IUS-12 and .913 for the K10. These are sample-specific estimates and do not, by themselves, establish validity or diagnostic accuracy.

Shapiro–Wilk testing did not indicate a statistically significant deviation from normality for IUS-12 scores, $W = .990$, $p = .289$. K10 scores showed a statistically significant deviation, $W = .977$, $p = .009$. Pearson’s correlation indicated a statistically significant positive association between IUS-12 and K10 scores, $r(159) = .632$, $p < .001$, 95% CI [.529, .717]. Spearman’s rank-order correlation was also positive and statistically significant, $r_s = .595$, $p < .001$. The null hypothesis was rejected.

The results indicate that participants who reported greater difficulty tolerating uncertainty also tended to report greater nonspecific psychological distress. The direction of association is consistent with prior work linking IU with worry and emotional difficulties [4,5] and with student research examining IU alongside distress [7,8]. However, comparisons should remain cautious because the studies differ in sampling, context, and measures. The K10 measures nonspecific distress; these results should not be interpreted as separate evidence about depression, anxiety, and stress.

The observed association does not establish causation or temporal order. Distress could influence perceptions of uncertainty, both variables could be influenced by other factors, or the relationship could be reciprocal. The mean scores describe this sample and should not be labelled clinically high or low without an appropriate interpretive framework. Cronbach’s alpha indicates internal consistency in this sample but does not establish construct validity or unidimensionality.

Table 1: Descriptive Statistics and Internal Consistency

Measure	N	Mean	SD	Cronbach’s α
IUS-12	161	32.11	9.44	.887
K10	161	24.31	8.09	.913

Note. IUS-12 = 12-item Intolerance of Uncertainty Scale; K10 = Kessler Psychological Distress Scale. Values are sample-specific.

Table 2: Association Between IUS-12 and K10 Total Scores

Analysis	Coefficient	p	95% CI
Pearson correlation	$r(159) = .632$	$< .001$	[.529, .717]
Spearman correlation	$r_s = .595$	$< .001$	[.475, .699]

Note. $N = 161$. Both correlations were two-tailed and statistically significant. The 95% confidence interval for Spearman’s rho was estimated using 20,000 paired bootstrap resamples (percentile method; [.475, .699]).

6. Conclusion

In this sample of 161 emerging adults aged 18–29 years who reported no previous mental-health diagnosis on the study screening item, intolerance of uncertainty was positively associated with self-reported nonspecific psychological distress. The association was statistically significant using both Pearson's and Spearman's correlations. The findings provide sample-specific evidence of co-occurrence, not causation, and should be interpreted in light of the cross-sectional design, convenience sampling, self-report measures, and screening procedure.

7. Future Scope

Future studies could recruit more diverse samples and use longitudinal designs to examine temporal relationships between IU and distress. Researchers could also measure relevant contextual variables, such as coping, social support, or major life transitions, when selected on a clear theoretical basis. If clinical status or current treatment is an eligibility criterion, it should be measured directly rather than inferred from a question about previous diagnosis.

Declarations

Informed consent: Participants provided consent through the online questionnaire before participation. Participation was voluntary.

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Conflict of interest: The author declares no competing interests.

Data availability: De-identified data may be made available by the corresponding author on reasonable request, subject to applicable permissions and confidentiality requirements.

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