

# Development and Validation of the Health Anxiety Inventory (HAI) Among College Students

## Abstract

The present study aimed to develop and validate a culturally appropriate Health Anxiety Inventory (HAI) for college students. The scale was constructed using established psychometric guidelines, including theoretical item development, expert review, pilot testing, and large-sample validation. The final 30-item HAI was administered to 183 college students from Holenarsipura. Reliability was evaluated using Cronbach's alpha, and construct validity was examined using item-total correlations. The findings demonstrated excellent internal consistency ( $\alpha = .912$ ) and strong item-total correlations (.32–.68). A scoring system was standardized to aid interpretation. The results confirm that the Health Anxiety Inventory is a reliable and valid measure of health anxiety in the cultural context of Indian college students. Implications for research, psychological assessment, and mental health interventions are discussed.

## Keywords

Health Anxiety, Inventory Development, Reliability, Validity, Cronbach's Alpha, Item Analysis, Psychometrics.

## Introduction

Health anxiety refers to the persistent worry about acquiring or suffering from a serious illness, often accompanied by misinterpretation of normal bodily sensations [1]. College students are particularly vulnerable to elevated health anxiety due to academic pressure, transitional stress, and extensive exposure to health information through digital media [2]. The rise of internet-based medical information has further intensified tendencies toward self-diagnosis and illness-related rumination [3].

Although existing tools such as the Short Health Anxiety Inventory [1] have been widely used, concerns remain regarding their applicability across different cultures, particularly in India, where health beliefs, symptom interpretations, and cultural expressions of anxiety differ significantly from Western contexts [4]. Thus, there is a need for

## Research Article

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a culturally sensitive health anxiety scale tailored for local populations.

The present study addresses this gap by developing and validating the Health Anxiety Inventory (HAI) designed by Dr. Krishnamurthy V. S. The scale development process followed standard psychometric procedures outlined in psychological measurement literature [5]. The study evaluates the reliability and validity of the HAI to determine its suitability for use among Indian college students.

## Method

### Research Design

A tool-development and validation approach were adopted, involving:

- **Construction Phase** (item generation, expert review)
- **Pilot Testing Phase** (refinement)
- **Standardization and Validation Phase** (large-sample administration)

This procedure aligns with standard recommendations for psychological test construction [6].

### Participants

The sample consisted of 183 college students selected

through convenience sampling. According to psychometric guidelines, this sample size is adequate for validation [7].

## Instrument

### Health Anxiety Inventory (HAI)

- 30 items
- Developed through theoretical review, expert evaluation, and pilot testing
- Higher scores reflect greater health anxiety
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### Reliability

- Cronbach's alpha = .912 → indicates excellent internal consistency

(Reliability benchmarks [8])

### Validity

Item–total correlations ranged from .32 to .68, demonstrating strong construct validity [9].

## Procedure

After ethical clearance and consent, the HAI was administered in classroom settings. Responses were scored according to the standardized scoring guide, and data were analyzed in SPSS (Version 25).

## Statistical Analysis

- Descriptive statistics
- Cronbach's alpha for internal consistency
- Item–total correlations for construct validity
- Standardization of scores for interpretation

## Results

### Internal Consistency Reliability

Measure	Value
Number of Items	30
Cronbach's Alpha	.912

This value indicates excellent internal consistency [8].

Table 1: Cronbach's Alpha for the Health Anxiety Inventory\*\*

### Construct Validity

Item Numbers	Correlation Range
Items 1–30	.32 – .68

All items exceeded the minimum acceptable threshold of .30 [9], supporting construct validity.

Table 2: Item–Total Correlations for the HAI\*\*

### Standardized Score Interpretation

Score Range	Level of Health Anxiety
0–30	Low
31–60	Moderate
61–90	High

Table 3: Score Interpretation Guidelines for the HAI\*\*

## Discussion

The present study successfully developed and validated a culturally relevant Health Anxiety Inventory for Indian college students. The high internal consistency ( $\alpha = .912$ ) aligns with psychometric expectations for well-constructed psychological instruments [10] and supports the coherence of the scale. The strong item–total correlations further confirm that the items adequately measure the underlying construct of health anxiety.

The findings coincide with earlier studies that emphasize the need for culturally sensitive assessment tools in non-Western contexts [4]. The HAI's strong reliability and validity suggest it can be effectively used for screening, research, and psychological intervention planning.

As health anxiety continues to rise due to increased medical information exposure [11], the availability of a localized measurement tool becomes crucial [12]. The HAI fills this gap by providing a robust, practical, and culturally relevant instrument.

## Conclusion

The Health Anxiety Inventory developed in this study is a psychometrically sound instrument with excellent reliability and strong construct validity. It is suitable for use in academic research, clinical screening, and counseling interventions. The culturally tailored items ensure its relevance and effectiveness for Indian college populations.

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