

## A Study on Hamilton Anxiety Rating Scale among College Students

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### ABSTRACT

The Hamilton Anxiety Rating Scale is an internationally used assessment tool for anxiety level however its acceptable factor structure remains fluid. This paper investigates the Anxiety level of college students with the help of Hamilton Anxiety Rating Scale. The Hamilton Anxiety Rating Scale was used for data collection. 36 college students 14 male and 22 female were selected from Haldwani, Nainital, Uttarakhand were selected for the purpose of study. The results of the study suggested that the Hamilton Anxiety Rating Scale is adequate to measure the anxiety level of male and females. There was no significant difference found between male and female in any variable.

**Keywords:** *Hamilton Anxiety Rating Scale, College Students.*

The word anxiety is derived from the Latin “anxietas” (to choke, throttle, trouble, and upset) and encompasses behavioural, affective and cognitive responses to the perception of danger. Anxiety is a normal human emotion. In moderation, anxiety stimulates an anticipatory and adaptive response to challenging or stressful events. In excess, anxiety destabilises the individual and dysfunctional state results. Anxiety is considered excessive or pathological when it arises in the absence of challenge or stress, when it is out of proportion to the challenge or stress in duration or severity, when it results in significant distress, and when it results in psychological, social, occupational, biological, and other impairment.

Anxiety is an extreme and persistent worry that interferes with daily living and symptoms can include panic attacks, physical fear reactions and attempts to avoid the situation. It is common for children to feel anxious in certain situations, but some children experience levels of anxiety that are beyond what would be expected for their age and developmental level, and this can stop them participating in school or other activities or interfere with their ability to do what other children and adolescents their age do. Nearly half of all children with a mental disorder experience an anxiety disorder. Anxiety can be normal in stressful situations such as public speaking or taking a test. Anxiety is only an indicator of underlying disease when feelings become excessive, all-consuming and interfere with daily living.

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Anxiety is an emotion characterised by feelings of tension, worried thoughts and physical changes like increased blood pressure.

Occasional anxiety is an expected part of life. You might feel anxious when faced with a problem at work, before taking a test, or before making an important decision. But anxiety disorders involve more than temporary worry or fear. For a person with an anxiety disorder, the anxiety does not go away and can get worse over time. The symptoms can interfere with daily activities such as job performance, school work, and relationships. There are several types of anxiety disorders, including generalised anxiety disorder, panic disorder, and various phobia-related disorders. Researchers are finding that both genetic and environmental factors contribute to the risk of developing an anxiety disorder. Although the risk factors for each type of anxiety disorder can vary, some general risk factors for all types of anxiety disorders include: Temperamental traits of shyness or behavioural inhibition in childhood Exposure to stressful and negative life or environmental events in early childhood or adulthood A history of anxiety or other mental illnesses in biological relatives Some physical health conditions, such as thyroid problems or heart arrhythmias, or caffeine or other substances/medications, can produce or aggravate anxiety symptoms; a physical health examination is helpful in the evaluation of a possible anxiety disorder.

People with generalised anxiety disorder (GAD) display excessive anxiety or worry, most days for at least 6 months, about a number of things such as personal health, work, social interactions, and everyday routine life circumstances. The fear and anxiety can cause significant problems in areas of their life, such as social interactions, school, and work. Generalised anxiety disorder symptoms include: Feeling restless, wound-up, or on-edge Being easily fatigued Having difficulty concentrating; mind going blank Being irritable Having muscle tension Difficulty controlling feelings of worry Having sleep problems, such as difficulty falling or staying asleep, restlessness, or unsatisfying sleep. When panic and anxiety symptoms escalate into anxiety attacks and panic attacks, it may be an anxiety disorder. Anxiety disorders include generalised anxiety disorder, social anxiety, and panic disorder. Anxiety attacks and panic attack symptoms can be treated with medication and psychotherapy.

Anxiety is arguably an emotion that predates the evolution of man. Its ubiquity in humans, and its presence in a range of anxiety disorders, makes it an important clinical focus. Developments in nosology, epidemiology and psychobiology have significantly advanced our understanding of the anxiety disorders in recent years. Advances in pharmacotherapy and psychotherapy of these disorders have brought realistic hope for relief of symptoms and improvement in functioning to patients.

According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), anxiety disorders include disorders that share features of excessive fear and anxiety and related behavioural disturbances. These disorders include separation anxiety disorder, selective mutism, specific phobia, social anxiety disorder (social phobia), panic disorder, agoraphobia, generalised anxiety disorder, substance/medication-induced anxiety disorder, and anxiety disorder due to another medical condition. Obsessive-compulsive disorder (included in the obsessive-compulsive and related disorders), acute stress disorder, and posttraumatic stress disorder (included in the trauma and stress-related disorders) are no longer considered anxiety disorders as they were in the previous version of the DSM. However, these disorders are closely related to anxiety disorders and the sequential order of these chapters in the DSM-5 reflects this close relationship.

### REVIEW OF LITERATURE

Biswas Saroni and Biswas Anirban (2021), in a study named "anxiety level among students of different colleges and universities in India during lock down in connection to the COVID-19 pandemic" assessed the psychological pressure on college and university students in india. A total number of 209 students were selected for the purpose of study. It was found from the study that, most of the college and university students in India were experiencing anxiety due to COVID-19 pandemic and lockdown, students who were less than twenty years of age, experiencing more anxiety. Further, it was found that female students were more anxious than male students. It was found that due to a delayed examination schedule and unfinished syllabus, students' anxiety was high. Students also needed enormous social support from family and friends because social support reduces the psychological pressure of the students.

Craig Rodriguez-Seijas, Justine S Thompson, Joseph M Diehl and Mark Zimmerman (2020), in a study named "A comparison of the dimensionality of the Hamilton Rating Scale for anxiety and the DSM-5 Anxious-Distress Specifier Interview" compared the underlying factor structures of Hamilton Anxiety Rating Scale and DSM-5 Anxious Distress Specifier Interview among clinical depressed and non-depressed patient. A total number of 576 clinically depressed and 146 non-depressed participants were included in the sample. It was found from the study that while two- and three-factor structures of the HAM-A fit similarly well among patients with a current major depressive episode, the three-factor structure-with anxiety and depressive symptoms forming separate factors-fit best among patients without a current major depressive episode. Further, study found that, there were stronger associations of DADSI with anxiety and somatic symptoms than with depressive symptoms of the HAM-A. The study also suggested that the findings add to the characterization of the DADSI, and further highlight an important consideration for the use of HAM-A as a measure of anxiety.

Mariusz S Wiglusz, Jerzy Landowski and Wieslaw J Cubala (2019), conducted a study "Psychometric properties of the Polish version of the Hamilton Anxiety Rating Scale in patients with epilepsy with and without comorbid anxiety disorder" and aimed to validate the polish version of the hamilton anxiety rating scale in adult PWE for detection of anxiety disorder. Anxiety disorders (ADs) are frequent comorbid disorders in patients with epilepsy (PWE). The availability of validated screening instruments to detect AD in PWE is limited. The aim of the present study was to validate the Polish version of the Hamilton Anxiety Rating Scale (HARS) in adult PWE for the detection of AD. A total number of 96 outpatients, who were diagnosed with the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders (4th Edition), were taken for the study. It was found from the study that the performance of the polish version of HARS was moderately well, for screening of anxiety disorder in PWE. Further, in epilepsy patients, HARS maintains moderate sensitivity, high specificity, and excellent Negative predictive value (NPV) but low Positive predictive value (PPV) for diagnosing Anxiety Disorders.

Verma Sangeeta, Singla Shivali and Goyal Sachin (2018), conducted a study entitled "To Assess and Compare the Outcome of Hamilton Anxiety Rating Scale (HAM-A) and Zung Self Rating Anxiety Scale (ZSRAS) in Patients of Generalised Anxiety Disorder Taking Sertraline Tablets", and aimed, assessing and comparing the outcome of zung self rating anxiety scale and hamilton anxiety rating scale in patients of generalised anxiety disorder taking sertraline oral tablets. A total number of 52 patients having moderate to severe generalised anxiety disorder without any other psychiatric disorder as per DSM-IV-TR were selected for study. The study found that sertraline is effective in controlling anxiety

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symptoms as perceived by rating scale. The changes in the zung self rating anxiety scale closely respond to changes in hamilton anxiety rating scale. The sensitivity and specificity of the zung self rating anxiety scale is lesser than the hamilton anxiety scale. Further, it was found that sertraline has good efficacy in treatment of generalised anxiety disorder.

Zimmerman Mark, Martin Jacob, Clark Heather, McGonigal Patrick, Harris Lauren and Holst Carolina Guzman (2017), in a study named "Measuring Anxiety in Depressed patients: A comparison of the Hamilton anxiety rating scale and the DSM-5 Anxious Distress Specifier Interview" examined, whether a measure of the specifier, the DSM-5 anxious distress specifier interview, was a valid as the hamilton anxiety scale as a measure of the severity of anxiety in depressed patients. A total of two hundred three psychiatric patients were interviewed by trained diagnostic raters. It was found from the study that hamilton anxiety rating scale and anxious distress specifier interview both were significantly and highly correlated with measures of anxiety than with measures of the other symptoms. The anxious distress specifier interview is briefer than the hamilton anxiety rating scale, and may be more feasible to use in clinical practice.

### *Aim of the Study*

To study the Anxiety level of college students with the help of Hamilton Anxiety Rating Scale.

### *The Objectives of the Study:*

- To study the socio-demographic profile of college students,
- To assess the anxiety level of college students.

### *Hypothesis of the Study*

There will be no significant difference in anxiety level among college students.

## **METHODS**

### *Participants*

A qualitative survey was conducted with a randomly selected sample of 36 college students living in Haldwani, Uttarakhand. Participants were assessed using HAM-A Scale and Key Demographic details also recorded.

### *Procedure*

The data of the study was collected from college students from Haldwani, Nainital. A sample group of 36 students (14 males and 22 females) were selected. The data of the study were collected from online methods through Google forms. The consent form was included with the google form, and after taking consent Hamilton Anxiety Scale was administered.

### *Tools Used for Data Collection*

- **Socio-demographic and clinical data sheet:** A self-made, semi structured socio-demographic sheet especially designed for the study was developed to collect information from the participants. It included details of name, age, sex, address, religion, marital status and family type etc. The items were all multiple-choice questions. The items were coded for analysis.
- **The Hamilton Anxiety Rating Scale (HAM-A):** Hamilton is a 14 items scale designed to assess the individual's level of both psychic and somatic anxiety,

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measured on a 5-point Likert scale ranging from 0 (not present) and 4 (Severe). The total scores range from 0-56.

### *Statistical Analysis*

Statistical Package for Social Science of window version 20.0 was used for analysis of the data collected. Descriptive statistics was carried out on socio-demographic data. Independent t-test and mean and SD were used to determine significant difference between the variables and the degree of relationship, respectively.

## RESULTS AND DISCUSSION

*Table no. 1 Demographic Details of College Students*

Variable		Male	Female
Age	15-20	4	5
	20-25	10	17
Sex		14	22
Place	Haldwani	14	22
Religion	Hindu	14	22
Marital Status	Unmarried	14	22
Family Type	Nuclear	14	22

*Table no. 2 Responses of College Students for Hamilton Anxiety Scale*

Variables	Male (N=14)		Female (N=22)		t-value	p-value	Significance Level
	Mean	SD	Mean	SD			
Anxious Mood	2.8	1.8	4.4	4.2	-0.695	.25336	Not significant
Tension	2.8	1.1	4.4	1.8	-1.46059	.09112	Not significant
Fears	2.8	2.4	4.4	3.0	-0.82078	.21777	Not significant
Insomnia	2.8	3.1	4.4	4.8	0.55205	.297997	Not significant
Intellectual	2.8	2.4	4.4	3.2	0.78072	.228722	Not significant
Depressed Mood	2.8	2.4	4.4	3.4	0.75425	.236158	Not significant
Somatic (Muscular)	2.8	3.6	4.4	3.4	0.63746	.270819	Not significant
Somatic (Sensory)	2.8	3.6	4.4	3.7	0.60911	.279674	Not significant
Cardiovascular Symptom	2.8	3.4	4.4	5.8	0.45808	.329541	Not significant
Respiratory Symptom	2.8	4.6	4.4	6.8	-0.38692	.354452	Not significant
Gastrointestinal Symptom	2.8	4.1	4.4	4.8	-0.50098	.31493	Not significant
Genitourinary Symptom	2.8	5.6	4.4	7.8	-0.33218	.37414	Not significant
Autonomic Symptom	2.8	4.1	4.4	5.4	-0.46578	.326896	Not significant
Behaviour at Interview	2.8	2.4	4.4	3.4	0.75425	.236158	Not significant

## RESULTS

The present study — A Study on Hamilton Anxiety Rating Scale among College Students was conducted on college students (Graduate and Postgraduate) residing in Haldwani, Nainital, Uttarakhand. The sample of 14 male and 22 females was included in this study.

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The sample was selected using a random sampling method, as per their inclusion and exclusion criteria. The Socio-Demographics were used to take general information as age, sex, educational qualification, place, religion, marital status and family type of college students, the Hamilton Anxiety Rating Scale were used to check anxiety level of college students.

For the purpose of the study, the age of college students were studied. The data presented in the above table no. 1 shows that the age range was from 15 years to 25 years. The Educational Qualification of respondents, as one can see from the above table was that 9 male were Graduate and 5 male were Post-graduate. Further, the table shows that 15 females were Graduate and 7 females were Post-graduate. All the participants belonged to Haldwani, Uttara Khand. It can be clearly seen from the table that there was an even distribution of male and female respondents in the sample, all male and female belonged to Hindu religion and was of nuclear family.

The above table no. 2 describes the response of all males and females who were administered the Hamilton Anxiety Scale on the variable **Anxious mood** (14 Male, M=2.8, SD=1.8, 22 female M= 4.4, SD= 4.2,  $t = -0.6$ ,  $p = .25$ ), **Tension** (Male, M=2.8, SD=1.1, Female M= 4.4, SD= 1.8,  $t = -1.4$ ,  $p = .09$ ), **Fear**, (Male, M=2.8, SD=2.4, Female, M=4.4, SD=3.0,  $t$ -value  $-0.8$ ,  $p$ -value  $.21$ ), **Insomnia** (Male, M=2.8, SD=3.1, Female, M=4.4, SD=4.8,  $t$ -value,  $0.5$ ,  $p$ -value  $.29$ ), **Intellectual** (Male, M=2.8, SD=2.4, Females M=4.4, SD=3.2,  $t$ -value  $0.7$ ,  $p$ -value  $.22$ ), **Depressed mood** (Male, M=2.8, SD=2.4, Female M=4.4, SD=3.4,  $t$ -value  $0.7$ ,  $p$ -value  $.23$ ), **Somatic Muscular** (Male, M=2.8, SD=3.6, Female M=4.4, SD=3.4,  $t$ -value  $0.6$ , and  $p$ -value  $.27$ ), **Somatic sensory** (Male, M=2.8, SD=3.6, Female M=4.4, SD=3.7,  $t$ -value  $0.6$ ,  $p$ -value  $.27$ ), **Cardiovascular Symptom** (Male, M=2.8, SD=4.4, Female M=4.4, SD=5.8,  $t$ -value  $0.4$ ,  $p$ -value  $.32$ ), **Respiratory Symptom**, (Male, M=2.8, SD=4.6, Female M=4.4, SD=6.8,  $t$ -value  $-0.3$ ,  $p$ -value  $.35$ ), **Gastrointestinal Symptom** (Male, M=2.8, SD=4.1, Female M=4.4, SD=4.8,  $t$ -value  $-0.5$ ,  $p$ -value  $.31$ ), **Genitourinary Symptom**, (Male, M=2.8, SD=5.6, Female M=4.4, SD=7.8,  $t$ -value  $-0.3$ ,  $p$ -value  $.37$ ), **Autonomic symptom** (Male, M=2.8, SD=4.1, Female M=4.4, SD=5.4,  $t$ -value  $-0.4$ ,  $p$ -value  $.32$ ), **Behavior at Interview** (Male, M=2.8, SD=2.4, Female M=4.4, SD=3.4,  $t$ -value  $-0.7$ ,  $p$ -value  $.23$ ). It was found from the study that there were no significant difference found between male and female in any of the variable.

In a study it was found that The Hamilton Anxiety Rating Scale has been considered as one of the earliest tools to measure the severity of perceived anxiety symptoms Thompson, 2015), if we compare the results of the study, the results support the study. The separation of anxiety into two separate (cognitive and physiological) but correlated constructs may provide a very useful model for the future examination of the impact of interventions for anxiety such as psychopharmacological treatment. The physiological dimension of anxiety would be affected by medication, yet this may not impact on the cognitive dimension of anxiety. It would also provide a better understanding of the impact of psychological ‘talking therapies’ in isolation or in combination with psychopharmacological interventions. Measuring how different therapeutic techniques impact on different dimensions of anxiety may help provide a better understanding of the effective treatment, identify relapse predictors or help identify when treatments should be discontinued. The high correlation between constructs suggests that all 14 items of the HAM-A are measuring an overarching single item of anxiety. Cronbach alpha scores confirm the summation of items of the HAM-A to produce an overall classification score and clinical banding (Ishikawa et al., 2015; Guo et al., 2016), countries.

## CONCLUSION

The results of the study suggested that the Hamilton Anxiety Rating Scale is adequate to measure the anxiety level of male and females. There was no significant difference found between male and female in any variable.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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