# DEVELOPMENT OF AN ANXIETY SCALE FOR UNDER GRADUATE STUDENTS OF DELHI.

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**ABSTRACT:**

*Anxiety is an important construct today, especially in the lives of students, as it affects their mental, physical and social wellbeing. Studies have focused on anxiety disorders of university students, some areas of their manifest anxiety, like academic anxiety, job anxiety, and death anxiety and so on. Currently, no Indian scale has been developed to measure the level of anxiety, of this population except Sinha's Anxiety Scale, constructed in the sixties. The present study outlines the development and validation of an Anxiety Scale for Undergraduate Students (ASUS) to measure their level of anxiety. The ASUS consists of 50 items and is on a 5 – point Likert scale. Results of data have demonstrated that the scale has internal reliability and construct validity.*

## INTRODUCTION

Anxiety has been a part and parcel of the human mind from time immemorial. In a normal or

Moderate amount it acts as a catalyst, a motivator that helps us to make efforts to do something.

However, if it persists, with or without reason, or exceeds the normal limit, it causes great harm tithe individual. In education it is imperative to know its levels, especially in the youth studying in higher education, as they are our immediate future and the country's and world's development is in their hands. Therefore, as their academic performance, as well as their social makeup are of

Paramount importance, we need to know their level of anxiety. Anxiety seems to be the dominant fact and is threatening to become the dominant cliché of modern life (Khanna, 1989).

## MEANING OF ANXIETY

Taking into account the historical perspective, in 1844, in 'The Concept of Anxiety', written by the Danish philosopher Søren Kierkegaard (1813–1855), anxiety was explained as the effect of freedom, of possibility, of the boundlessness of one's own existence — a kind of

choice. It was different from concepts like fear that refer to something definite, as it is freedom's actuality or possibility. The existential psychologist Rollo May in his 'The Meaning of Anxiety', originally published in 1950,took this idea further saying that Kierkegaard's relation between guilt and anxiety can be understood only by emphasizing that he always spoke of anxiety in its relation to creativity. As it is possible to create — creating one's self, willing to be one 's self, as well as creating in all the innumerable daily activities— one has anxiety. One would have no anxiety if there were no possibility whatever. Now creating, actualizing one's possibilities, always involves negative as well as positive aspects. It always involves destroying the status quo, destroying old patterns within oneself, progressively destroying what one has clung to from childhood on, and creating new and original forms and ways of living (Popover, 2013).

According to The Encyclopedia of Psychology (2000), anxiety is an emotion characterized by heightened autonomic system activity, specifically activation of the sympathetic nervous system i.e. Increased heart rate, blood pressure, respiration and muscle tone), subjective feelings of tensions and cognitions that involve apprehension and worry. Although subjective experience of anxiety is not necessarily accompanied by particular behaviors, behavioral indicators are often present, such as speech dysfluencies, avoidance of the focal object or event, immobilization or observable tremor.

Different dictionaries have defined anxiety. It is a state of uneasiness or tension caused by Apprehension of possible future misfortune or danger, intense desire or eagerness. In Psychology it is a state of intense apprehension or worry often accompanied by physical symptoms such as shaking, intense feelings in the gut, etc., common in mental illness or after a very distressing experience(Collins English Dictionary, 2003). It is a feeling of fear and apprehension, persistent doubt or fear, state of mind burdened by heavy responsibilities, serious thought combined with emotion, active

And sometimes excessive concern for another's wellbeing (The American Heritage ® Dictionary,

2009). It is distress or uneasiness caused by fear of danger or misfortune, earnest but tense desire, astute of apprehension and psychic tension, a threat to some value which the individual holds essential to his existence as a personality (Webster's College Dictionary, © 2010).

Many eminent psychologists have also, tried to define anxiety. Sigmund Freud (1923, 1924), Described anxiety as 'something felt', an unpleasant affective state or condition. This state in patients with anxiety-neurosis, was characterized by "all that is characterized by the word 'nervousness', apprehension or anxious expectation and efferent discharge phenomenon (Freud, 1923,1924). May (1950), feels that the special characteristics of anxiety are the feelings of uncertainty and helplessness in the face of danger. Anxiety was the apprehension cued off by, too much self- indulgence and too little self- restraint ( Mowrer, 1953). The term anxiety is most often used to describe an unpleasant state or condition which is characterized by subjective feelings of tension, apprehension and worry, by activation or arousal of automatic nervous system (Spielberger et al, 1966). Anxiety is an emotion based on the appraisal of threat, an appraisal which entails symbolic, anticipatory and uncertain elements…anxiety results when cognitive systems no longer enable a person to relate meaningfully to the world about him (Lazarus et al,1970).Anxiety is an unpleasant emotional reaction to real or imagined dangers, accompanied by autonomic discharge and subjectively experienced, such as tension, fright or nervousness (Beck, 1972).

Mathison (1977) defined anxiety as a state that has association with feelings of uncertainty, helplessness and threat to the core of personality. Anxiety in general causes vague diffuse feelings ofuneasiness, distress, inner tension and worrying in advance (Schalling, 1978). These play a critical role in evoking differences in drive level. According to Spielberger (1983), during the 20th century, the concept of anxiety attracted much attention from psychologists, since that period was known as the 'age of anxiety'. He felt that, generally speaking, if an individual perceives and appraises particular situation as threatening, an unpleasant emotional reaction usually occurs. This reaction is known as anxiety. Gray,(1982) and Gray and McNaughton (1996), defined anxiety as a state of the conceptual or central nervous system characterized by activity of the behavioral inhibition system(BIS). Almost all agree that ' the characteristics of anxiety as an emotion are that it is distressing andthat its sources are indefinite', (The Oxford Companion to the Mind, 2006).

**THEORIES OF ANXIETY**

Anxiety has been found as a central explanatory concept in almost all contemporary theories of

personality (Chadha, 1982). For many years, theories of anxiety were rooted primarily in the

experiences of clinical workers and the insight of the sensitive observers of the west.Theories of anxiety, can be classified as psychoanalytical, learning/ behavioural, physiological,phenomenological/existential, cognitive and those concerned with uncertainity (Strongman, 1995).For the most part the bases of these theories are consideration of human anxiety. However, someexperimental investigations that surround them, are based on animal subjects.

**PSYCHOANALYTIC THEORY**

A systematic study of anxiety started with Freud's conceptualization of it as a signal of danger. Thistheory of Freud remained influential particularly in applied and clinical settings. Freud (1923,1924),distinguished anxiety as an emotional state or condition. He proposed two theories of anxiety – in1917 and 1926. In the first, anxiety was regarded as a transformed libido, the transformation coming through repression. So, if a person was prevented from doing some instinctive act through repression, anxiety would result. It arose, when the individual expected punishment or disapproval for his behavior or thought or when mental conflict became severe. So he believed anxiety to be a physical feeling generated by sexual strivings. He believed that such sexual tensions were transformed into anxiety as a result of repression.

He felt that ego was confronted by excessive stimulation, which when not brought under control

became flooded with anxiety. Severe anxiety affected individuals' adjustment and caused mental

disorders. The resulting symptoms would stop more anxiety from developing. Concern was with

automatic anxiety, resulting from trauma of birth and experiences of the infant, immediately after it.

In his second theory, he reversed the anxiety- repression linkage, and said that repression occurred because of experience of anxiety. So anxiety was a signal from the ego of real or potential danger .The unpleasantness of the threat resulted in anxiety, which then resulted in repression as a way of getting out of danger. He delineated three forms of anxiety)

Realistic Anxiety – Here the danger is real, cognition and perception are accurate and the response is appropriate and adaptive.

b) Neurotic Anxiety – This is generated by conflicting id impulses.

c) Moral Anxiety – This is generated by conflict between the ego and the super–ego.

Anxiety, in both theories, was an everyday phenomenon. This everyday anxiety was realistic anxiety.

This has often been referred to as fear. Neurotic anxiety, according to him, could be free-floating

anxiety, phobic or part of a panic attack and stress was an avoidance of over-stimulation. He gave

three main aspects of anxiety –

1.An unpleasant feeling ,or a feeling of a specific unpleasurable quality.

2.Some sort of discharge process i.e. an efferent or discharge phenomenon

3. Perception of the phenomenon involved in the discharge.

Later psychoanalysts, or Neo- Freudians, like Goldstein (1939), May (1950), Rogers (1951), Sullivan(1953), Fromm-Reichmann (1956) Grinker (1959) and Horney (1964),presented views moreor less, consistent with Freud's formulation of anxiety as an emotional state and as a reaction toenvironmental conditions, perceived by the child as threatening to his development and integrity. It is accompanied by feelings of fear of isolation, insecurity, helplessness and perception of the outside world as hostile. A psychoanalytic approach, advanced the view that anxiety is largely determined byte nature of a situation and interacts with personal characteristics of the individual (Sarason 1972).

Sullivan (1953), emphasized social environment rather than separation, so anxiety was a social,

interpersonal phenomenon rather than an intra-psychic one. Bowlby (1973), stressed the relationshipwith the mother, saying that this was based on the apprehension that the mother was not there. Izard(1977, 1991), said that the adaptive functions of anxiety, were dependent on the cognitive processes that are a part of the individual's learning and appraisal. Levitt (1967) feels all Freudian theory is conflict oriented. Freud stressed the signaling properties of anxiety. Earlier Pavlov(1927a,1927b) also considered apprehension of danger as an important characteristic of anxiety (Spielberger 1972).

## LEARNING / BEHAVIOURAL THEORY

These theories were originally from Pavlov (1927a,1927b) and Watson (1925). Their main function was to explain punishment. Organisms learn to avoid noxious stimuli through some mediating mechanism. This mechanism is normally called fear or anxiety. Post –Pavlov and Watson, analysis was that when a conditioned stimulus was paired with an unconditioned one (which happened to be noxious and caused pain ), several pairings led to a conditioned response. This was fear or anxiety which is often used synonymously by these theorists. The conditioned responses are called secondary or acquired drives, by classical conditioning. They establish new behavior. Also a conditioned emotional response could interfere with ongoing behavior.

This view was initially developed by Dollard and Miller (1950) and Mowrer (1953). They said that drive reduction follows a response, reinforces it, thus increasing the possibility of its recurrence. Fear was a learned or secondary drive. Mowrer (1953), felt anxiety was a form of fear, when its source was vague or repressed. This fear was learned and anxiety was built on this through neurotic conflict. Thus, neurotic fear is anxiety as its source is obscured. These conflicts of childhood, give rise to anxiety in later life. So, anxiety is learned and once learned , motivates maladaptive behavior.

Later, Staats and Eifert (1990), gave a multi- level behavioral theory of anxiety, which rests on twobasic assumptions – 1.There is a central emotional response at the basis of anxiety. 2. Anxiety can be acquired through aversive conditioning or language. So, it is not necessary to have a traumatic experience to develop phobia. Negative thoughts and words can also lead to images of panic.

Hans Eysenck's (1957, 1997), learning theory of anxiety rests on his personality theory, which

depends on two major dimensions – extroversion/ introversion and neuroticism. The neurotic

individual is sensitive to anxiety – provoking stimuli. This sensitivity is based on the autonomous nervous system. So anxiety – proneness is inherited. Secondly, according to him, it can also be learned. Traumatic events can lead to unconditioned fear, which can become conditioned, leading tone stimuli, which produce the original maladaptive anxiety responses. Thirdly, a person may inherit

an excitation – inhibition imbalance. When this puts the individual at the mercy of social learning, to be introverted, the person is more prone to anxiety and other emotions, like guilt. Thus anxiety is partly inherited and partly learned. The learning part depends firstly on conditioned fear and secondly on the state of the nervous system.

## PHYSIOLOGICAL THEORY

Physiological and neuron-physiological theories of anxiety are based largely on what parts of the

central nervous system (CNS) may be involved, in emotion in general and fear / panic / anxiety, in particular. It is largely through empirical research, that we have arrived at these findings. These

physiologically based theories rely on a model of human psychology, based on natural science. For them anxiety involves particular parts of the CNS, with addition of general arousal. Some theorists ,like Eysenck (1957, 1997), linked learning and physiology, in accounting for anxiety. Others likeOhman (1993), link cognition and physiology. Gray (1982,1987), is a physiological theorist of note,who makes an extensive conceptualization of fear and includes anxiety within it. He says that thebehavioral inhibition system undermines anxiety, as it suppresses any behavior that threatens anunwelcome outcome. He speaks of a complex septal- hippocampal system as the basis of anxiety(and other emotions) and in particular as acting as an interface between emotion and cognition. Also,other parts of the brain are also involved in anxiety, but the septo – hippocampal system is central.

## PHENOMENOLOGICAL / EXISTENTIAL THEORY

These theories of anxiety have their origin in Kirkegaard, 150 years ago (1844). He saw anxiety as anaturally occurring state of a person. Development and maturity, depend on freedom, which in turn depends upon possibilities. Anxiety is an integral part of experiencing possibilities. We have a series of choices from birth onwards. At each choice there is anxiety. He also made a distinction betweenfear and anxiety. Fear is of a specific object, whereas anxiety is independent of any object. It is a necessary condition of choice. A fearful person moves away from a feared object, whereas an anxious person is in conflict and unsure. For a person to develop, he must face the anxiety and deal with it.

Fisher (1970), has done much to bring a phenomenological or experimental approach to

understanding anxiety, into the twentieth century. He does so by attempting to integrate all previoustheories. He brings everything together in terms of anxious experiencing. This involves five

components:-

1. There is an identity, which takes the form of milestones towards a way of living. Anxiety results if any of these milestones are threatened , so that they may be lost.

2. There is a world which consists of, a network of relations and involvements for each milestone. Anxiety results if this world is threatened or anything in it seems insurmountable.

3. There is motivation in which the world and the person's identity is perpetuated.

4. There is an action, which is involved in achieving a milestone and which expresses being .

5. Finally, there is ability which is a lived evaluation of uncertain competence. For Fischer (1970) then, anxiety is both anxious experiencing and the experiencing of the self.

**COGNITIVE THEORY**

Two major cognitive theories of anxiety of Michael Eyesenck (1988) and Ohman (1993), have a

central place for cognition. Eyesenck (1988) says that the cognitive system is a gateway for the

physiological system, so to understand anxiety we need to consider both systems. There are differences between people who are high or low in trait anxiety, in the information they have stored

in their long term memory, in the fact that they are anxious in some stress producing situations andnot in others and in the process and structure of their cognitive systems. Their memories differ inbroadly and in specific items such as type and amount of specific worries they might have. Thosehigh in trait anxiety, worry more. They have more frequent and more highly organized set of worries in long term memory. Also their negative mood states, assist mood-state –dependent retrieval. His theory of trait anxiety, takes into account the cognitive system, along with thephysiological and behavioral systems.

Ohman (1993), has put forward his information processing theory of anxiety. It consists of five majoraspects-

1. Stimulus information goes into feature detectors, and then to significance evaluators.

2. The significant evaluators automatically assess their relevance, with expectancies setting the

system to look for particular inputs.

3. The arousal system can tune up the significance evaluator and give input to conscious perception

system.

4. The expectancy system is based on emotion being organized into memory. This is a standard

cognitive system of networks and nodes.

5. The conscious perception system is part of a much larger system- the mind, consciousness and thecognitive- interpretative system.

It integrates input from the arousal system, the significance evaluators and the expectancy systems. Itthen picks out a suitable system to deal with the perceived threat. If avoidance or escape is possible, the result is fear. If not, the result is anxiety. So, as in most theories, fear is seen as having a tangibleobject and outcome, which anxiety does not. Responses of fear and anxiety originate in an alarm system, shaped by evolution to protect creatures from impending danger. Anxiety is of two typesdirectedwhen responses are blocked and undirected when it comes from the unconscious. Thus, phobias and panic disorders arise from physiological roots and generalized anxiety, from a cognitivebasis.

**UNCERTAINITY THEORIES**

Three emotion theorists, whose theories of emotion in general and of anxiety in particular, cut acrossmore traditional divisions, are- Izard (1977,1987), Lazarus(1991) and Mandler (1972,1984). All seeuncertainty as a core part of anxiety, in that there is lack of surety about the future and what actionsto take in the face of threat.Izard (1977, 1987), says that the feeling state of any type of anxiety, is fear

However , anxiety islinked with various other emotions at different times and in different situations, e.g. interest/excitement, sadness, shame and guilt. Through his 'Differential Emotions Theory', he argues that though anxiety should be considered as a unitary phenomenon, the other discrete emotions which arelinked with it from time to time , must also be taken into account, as far as subjective experience isconcerned. In this context, he considers anxiety as being dependent on uncertainty.

This notion of uncertainty is taken further by Lazarus (1991), who brackets anxiety with fright. Frightoccurs when there is imminent physical harm, whereas anxiety is characterized by uncertain,ambiguous, existential threat. His distinction between fright and anxiety, is similar to Freud's (1923,

1924) between objective and neurotic anxiety. Various primary appraisals might contribute to anxietye.g. if there is goal relevance, then any emotion may occur with anxiety. If there is goal irrelevance,only negative emotions will occur with anxiety. However, if ego - involvement is protection of personal meaning, protection of ego- identity against existential threat, then anxiety is the onlypossible reaction.

Uncertainty, as the core of anxiety, produces a strong drive to objectify it, to make whatever the

threat is, external and objective, in order to reduce the uncertainty. Also, a person's ability to cope isalso uncertain. The problem with anxiety, he says is that once one objective threat is coped with,another takes its place, as the basic problem is existential.

Mandler (1972, 1984), gives the most sophisticated explanation of anxiety, which is based on

uncertainty. He synthesizes previous theories as having three common elements:- 1.Archetypal

anxiety – invoking events, exist primitively, innately or congenitally.2.Responses to these events are transferred to other events, that were originally neutral, simply through congruity. This may beexternal, or through an organism's actions. 3. Events that end or reduce anxiety, are related to events that also invoke anxiety. e.g. the danger of overstimulation, is reduced by reducing the stimulation.

In his own explanation, he gives a non-traumatic theory of the sources of anxiety. He terms anxietyas fundamental distress. This was a state of unease or anxiety, that did not have a specific causativeevent. The core of his theory of anxiety depended on the link between anxiety and interruption (oforganized sequences of responses and/ or expectations), for e.g. the cyclical distress of newbornprovides the first experience of anxiety. This distress does not bear any relationship to antecedentevents, though inhibitors like sucking and rocking reduce it, but may come back if they arewithdrawn. The imperfections of human beings makes them helpless as they are uncertain what to do.

This may lead to depression if it continues for long or with repeated failures.

Apart from the types of anxiety, explained in the theories above, **researches today, are**

**concentrating more on the specific sources/ causes of anxiety, or the particular areas where**

**anxiety manifests itself. Several subtypes of anxiety, have been identified.** They share certain

features in common and any one of them could be characterized with terms such as apprehension,dread, panic, tension and worry (Encyclopedia of Psychology 2000). The nebulous character of thephenomena, prompted many researchers to focus their attention on the specific sources of anxiety insocial, public speaking and test situations ( Sud, 2001).

According to this criteria, **some** forms of anxiety, being vociferously researched today, are as follows :-

**TEST ANXIETY**- 'is concern about negative evaluation that students experience before and during a test. Theanxiety may take the form of worry-unwanted, negative thoughts about one's performance, or emotionalityphysiological

symptoms such as increased heart rate and sweaty palms(Hembree,1988; Powers,2001).

Hembree'smeta analysis of 562 studies found negative correlations between test anxiety and IQ, GPA,

course grades and achievement scores in reading, math, natural sciences and other subjects. Hembree

(1988), concluded that test anxiety is not only related to poor performance but is the cause of it because

interventions that lowered test anxiety resulted in high achievement. Furthermore, women reported more

test anxiety than men, although their performance levels were the same.

**ACADEMIC ANXIETY**- is a kind of anxiety which relates to the impending danger from the environments

of the academic institutions including teacher and certain subjects like mathematics, science, English

etc. It is a mental feeling of uneasiness of distress in reaction to a school situation that is perceived

negatively (Narania and Singh 2014). Academic Anxiety is the result of biochemical processes in the

body and the brain that make your attention level increase when they occur. The changes happen in

response to exposure to a stressful academic situation, such as completing school assignments

presenting a project in class or taking a test.

**COMPUTER ANXIETY**-Chua, et al (1999) defined computer anxiety as a fear experienced when using a

computer or thinking about using a computer. Their meta analysis of studies published since 1990

showed that computer experience was negatively related to computer anxiety.

**MATHEMATICS ANXIETY**- Math anxiety is more than a dislike towards math. Richardson and Suinn

(1972) have defined mathematics anxiety is a feeling of tension and anxiety that interfere with the

manipulation of mathematical problems in varied situations in ordinary as well as academic life. It

can also be explained as a sense of discomfort observed while working on mathematical problems (

Trujillo and Hadfield, 1999; Ma, 2003)

**ANXIETIES OF KNOWING**- include anxieties about reading, writing, speaking, thinking and learning.

Anxiety means uneasiness or uncertainty and sometimes fear of an anticipated state, event or

situation, that may cause psychological impairment or feelings of insecurity and helplessness (Peters

2015).

**SEPARATION ANXIETY**- in children fear of separation from mother or main career. In college students,

excessive fears of separation from family members, familiar surroundings etc.

**SOCIAL ANXIETY**- IS the fear and avoidance of social situations in which a person may be exposed to

negative evaluation by others.

**SPORTS ANXIETY**- another form of social-evaluative anxiety, has been conceptualized as a trait and a

state, as well as an interactional process (Richardson and Woolfolk, 1980).It is an anxiety experienced while taking part in sports activities.

**FREE FLOATING ANXIETY-** a generalized, persistent, pervasive fear that is not attributable to any

specific object event or source .

**PARADOXICAL ANXIETY-** is anxiety caused by using the methods or techniques that our normally used

to reduce it like cognitive behavioral therapy, meditation etc.

**CHOICE OR DECISION ANXIETY-** being in excessive fear and worry while making everyday decisions and

choices.

**EXISTENTIAL ANXIETY**- Essence of man is the recognition that 'being' and 'nothingness' are inevitable

consequences of human existence. Existential Anxiety is derived from man's experiences of the

dissolution of his experience of 'being'(Sartre,1972). Alienation is the elemental property of this

anxiety. Existential theory speaks of two forms of anxiety, namely, existential and neurotic anxiety

(Boss 1962, Binswanger 1963, Laing 1961, Sartre 1972). The feeling of alienation leads to experience of dread and anger and the individual experiences existential anxiety. This if it is not

resolved, leads to neurotic anxiety or physiological anxiety.

**PSYCHOLOGICAL TESTS**

Psychological tests have been variously defined: They are essentially an objective and standardized

measure of sample of behavior (Anastasi and Urbina 1998). A test is a standardized procedure for

sampling behavior and describing it with scores and categories (Cullari, 1998). A Psychological test

or education test is a set of items designed to measure characteristics of human beings that pertain to

behavior ( Kaplan and Saccuzzo,2001).

**AN OVERVIEW OF FOREIGN TESTS OF ANXIETY**

**HISTORICAL PERSPECTIVE**

Spielberger (1966,1971,1972), Reiss (1997), and Endler and Kocovski (2001) have offered helpful

summaries of the evolution of scientific interest in anxiety, which has long been recognized but only

relatively recently studied systematically…The 1950s saw the development of an experimental

tradition in studying anxiety. Laboratory studies assessed the links among personal drive, anxiety, the

complexity of an experimental task and feelings of fear and frustration. In 1953, Taylor presented her

Manifest Anxiety Scale (TMAS) that built on Freudian theme of neurotic anxiety. The TMAS was

widely used in experimental research; common findings were that people with higher drive, or

"manifest anxiety," showed superior performance ( McDowell,2006).

During the 1960s, this reference to personality led to Spielberger's (1966) empirical demonstration of

a distinction between anxiety as a reaction versus an underlying tendency to respond to threats.

Cattell and Scheier (1961) and others had applied newly developed multivariate analysis techniques

to measures of anxiety, thus also showing two distinct facets of anxiety, state, and trait. These

conceptual developments were reflected in the world of health measurements, and in 1963 Cattell and

Scheier developed the Anxiety Scale Questionnaire (ASQ) to measure trait anxiety. It was distributed

by the Institute for Personality Assessment and Testing, so it was also called the IPAT Anxiety Scale

(McDowell, 2006, p9). Spielberger's(1966) contribution was to clarify further the distinction

between trait and state anxiety, leading to his State-Trait Anxiety Inventory (STAI). State and trait

anxiety have been likened to kinetic and potential energy (Endler and Kocovski,2001, p232), but

defining trait anxiety in terms of a general tendency to respond anxiously to stress does not define

either the general tendency or the types of threat (Reiss,1997, p204). Anxiety can feed on itself, so a

subsequent development was to try and separate feelings *of* anxiety from feelings *about* anxiety

(McDowell, 2006).

The Anxiety Sensitivity Index (ASI) was proposed to record individual differences in fear of

experiencing anxiety. A person who is sensitive to anxiety would tend, for example, to anticipate that

a rapidly beating heart presages a heart attack; a person with low sensitivity might perceive stress as a

transient nuisance (Reiss,1997, p206). Anxiety sensitivity appears similar to trait anxiety, except that

it refers less to past tendencies than to future fears about the consequences of anxiety. More recently,

Endler has presented a multidimensional model of anxiety that maintains the state-trait distinction,

but subdivides each component (Endler,1975;Endler et al,1991a and Endler and Kocovski,2001).

This is portrayed in the Endler Multidimensional Anxiety Scales (EMAS), which divides state scores

into cognitive-worry and autonomic-emotional components (Endler et al, 1991b).

A 1991 paper by Clark and Watson formed a watershed in formulating the conceptual distinction

between anxiety and depression (Clark and Watson,1991).

**ANXIETY TESTS**

**THE TAYLOR MANIFEST ANXIETY SCALE (TMAS)** is a test of anxiety as a personality trait. It was

developed by Janet Taylor in 1953 to identify subjects who would be useful in the study of anxiety

disorders. It has subsequently been used as a general indicator of anxiety as a personality trait; it is

not intended as a specific measure of anxiety as a clinical entity (Zung,1974). The test was for adults

but in 1956 a children's version was developed (Castaneda et al, 1956). These scores showed Taylor -

"manifest anxiety"—that is, anxiety that was evident and self-perceived. Her theory predicted that on

simple tasks, performance would be improved by higher levels of drive, as reflected on her measure

of anxiety. The theory further predicted that on more complex tasks, anxiety level would be negatively related to performance. This was later confirmed. Her empirical testing of the TMAS was

based on trials with undergraduate students undertaken between 1948 and 1951 (Taylor,1956). Her

empirical testing of the TMAS was based on trials with undergraduate students. True-false responses

are used for each item, and the replies indicating anxiety were counted, giving a score from 0 to 28.

The TMAS played an important role in the history of research on anxiety. It was one of the earliest

psychometric measures of anxiety and its content influenced the design of the State-Trait Anxiety

Inventory (McDowell, 2006).

**BECK ANXIETY INVENTORY (BAI)**

Beck's self-report Anxiety Inventory (BAI) measures the severity of self-reported anxiety in adults and adolescents; it was especially designed to minimize confounding with symptoms of

depression. The BAI is a brief measure of anxiety with a focus on somatic symptoms of anxiety that

was developed as a measure adept at discriminating between anxiety and depression (Fydrich et

al,1992).

It is administered via self-report and includes assessment of symptoms such as nervousness, dizziness, inability to relax, etc. It has a total of 21 items. Respondents indicate how much they have

been bothered by each symptom over the past week. Responses are rated on a 4-point Likert scale

and range from 0 (not at all) to 3 (severely).

It is used in efforts to obtain a purer measure of anxiety that is relatively independent of depression.

This is a self-report or interviewer administered questionnaire that can be administered in an

individual format. Scoring is easily accomplished by summing scores for items. The total score

ranges from 0–63. The following guidelines are recommended for the interpretation of scores: 0–9,

normal or no anxiety; 10–18, mild to moderate anxiety; 19–29, moderate to severe anxiety; and 30–

63, severe anxiety.

## THE DEPRESSION ANXIETY STRESS SCALES (DASS)

The Depression Anxiety Stress Scales (DASS) are designed to assess the severity of core symptoms

of depression, anxiety, and tension (or stress) over the previous week. Together, the scales provide a

broad-spectrum measure of psychological distress, indicating the severity and frequency of

symptoms. Originally developed for use with general population samples, they can also be used in

clinical research.

The revised scale includes 42 negative symptoms; 14 each cover depression (DASS-D), anxiety

(DASS-A), and stress (DASS-S). Scores of 0 to 77 represent normal state, 78 to 86 represent mild

disorder, 87 to 94 represent moderate disorder, 95 to 97severe, and 98 to 100 represent extremely

severe distress (Lovibond and Lovibond,1995). The scales were developed for people aged 17 or

older but may be suitable for younger adolescents.

## IPAT ANXIETY SCALE

Cattell and Scheier (1963) developed the Anxiety Scale Questionnaire (ASQ) to measure trait

anxiety. It was distributed by the Institute for Personality Assessment and Testing, so it was also

called the IPAT Anxiety Scale (Spielberger,1985, p9).It is a very convenient and practical measure of

anxiety level. It has 40 items, with three alternatives – yes, in between and no. Items are classified

into 20 items sub-scales. One scale measures covert anxiety and the second measures overt anxiety.

The items are simple and scored as 2,1 or 0.Overt refers to manifest indication of anxiety. Covert

refers to less obvious signs of anxiety. It is constituted on the basis of 5 principal personality factors,

namely emotional stability, suspiciousness, guilt proneness, low integration and tension. It is for 16

years to adults. It is a widely used test with adults, college and high school children.

## ZUNG'S SELF-RATING ANXIETY SCALE (SAS)

The self-rating anxiety scale (SAS) consists of 20 items and is a four-point scale. Index for the scale

is derived by dividing the sum of the values (raw scores) obtained on the 20 items by the maximum

possible score of 80, converted to a decimal and multiplied by 100. The original aim of the scale was

to fulfill the need for a standardized method of evaluating and recording the presence of anxiety as a

clinical disorder. He proposed a cutting-point of 44/45 to indicate clinically significant anxiety

(Zung,1980, p18). Scores of 45 to 59 indicate "minimal to moderate anxiety"; 60 to 74 suggests

"marked to severe anxiety" and 75 or higher indicates extreme anxiety (Zung and Cavenar,1980,

p356). Zung studied 225 psychiatric patients and 343 non-patients (Zung, 1974). The correlation

between the self- and clinician-administered versions was 0.66 overall, rising to 0.74 for patients with

a diagnosis of anxiety disorder (Zung,1971, p378). Zung reported mean scale and item scores for

healthy adolescents (aged 14–19 years) and adults (Zung, 1980,). The mean for adolescents was 45.1

(SD, 8.9); that for adults aged 20 to 64 was 34.4 (SD, 6.9) and for adults 65 and over the mean was

36.9 (SD, 8.8).

**THE SPIELBERGER STATE TRAIT ANXIETY INVENTORY (STAI)**

The state-trait anxiety inventory (STAI) was first developed in the 1960s (Nixon and Steffeck,1977)

and later revised in 1983. The original STAI is usually called the STAI-X, and the revised STAI is

usually referred to as the STAI-Y. Although the two versions are highly correlated, several items

were changed and scores on the "Y-version" are said to have a more replicable factor structure and

improved psychometric properties. Both instruments are commonly used and copyrighted for both

clinical and research use.

The STAI is a self-report questionnaire that evaluates feelings of apprehension, tension, nervousness,

and worry. There are two scales, designed to differentiate between the temporary condition of "state

anxiety" and the more general and long-standing quality of "trait anxiety." The time frame for the

"state" questionnaire is "right now," which may yield problems when assessing patients with panic

disorder outside the context of a panic attack. The time frame for the "trait" questionnaire is not

defined. Each scale has 20 statements that as scored as a four-point Likert item, ranging from 1 ("not

at all") to 4 ("very much so") for the state scale (reflecting intensity), and 1 ("almost never") to 4

("almost always'') for the trait scale (reflecting frequency). Although it is used routinely in clinical

settings, the STAI was developed largely with nonclinical undergraduate college and high school

students (Beck et al, 1988, p896).

## THE HAMILTON ANXIETY RATING SCALE (HARS)

Hamilton developed the HARS within a diagnostic tradition that distinguished between anxiety as a

normal reaction to danger, anxiety as a pathological condition not related to stress, and anxiety as a

state or broad syndrome that he termed "anxiety neurosis" (Hamilton,1969). Although intended as a

severity rating, Hamilton also used his scale to distinguish empirically between anxiety as a

pathological mood, versus a state (or neurosis). His scale had 14 categories. The 14 scores are

summed to give an overall score ranging from 0 to 56, with higher scores indicating higher levels of

anxiety. A total score between zero and five represents no anxiety; six to 14 suggests minor anxiety,

whereas scores of 15 or higher indicate major anxiety (Bech et al,1986 p10). If a single cutting-point

is required, scores of 14 and higher are often taken to designate a case.

## THE ADULT MANIFEST ANXIETY SCALE–COLLEGE VERSION AMAS-C ( Lowe et al, 2007)

The Adult Manifest Anxiety Scale–College Version (AMAS-C; Reynolds et al, 2003b) is a new, multidimensional, self-report measure used to assess chronic, manifest anxiety in college students.

Manifest anxiety is a form of trait anxiety (Reynolds, 1985).The AMAS-C is, conceptually, an upward extension of the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds and Richmond, 1978), a common measure used to assess anxiety in children and adolescents. However,

the AMAS-C items were written specifically to target college-age students in a collegiate setting and

item selection was based on the responses of college attendees (detailed information on item

derivation and selection can be found in (Reynolds, et al, 2003d) the RCMAS is a downward

extension of the original version of the Taylor Manifest Anxiety Scale (TMAS; Taylor, 1953).

The AMAS-C and RCMAS are unique because these two measures are part of a series of measures

that are used to assess common manifestations of anxiety found among individuals of different age

groups across the life span as well as the developmental variations in anxiety symptoms found among

individuals of different ages. That is, the RCMAS and AMAS-C along with two other versions of the

AMAS, the Adult Manifest Anxiety Scale–Adult Version(AMAS-A; Reynolds et al, 2003a) and the

Adult Manifest Anxiety Scale–Elderly Version (AMAS-E; Reynolds et al, 2003c) are used to assess

common and uncommon manifestations of anxiety in the child and adolescent, college student, young

and middle-age adult, and older adult populations, respectively. The AMAS-C is designed

specifically to assess anxiety in college undergraduate and graduate students and consists of five

anxiety scales and a Lie scale. The Total Anxiety scale provides a global measure of chronic,

manifest anxiety and consists of 42 items (i.e., all of the items from the anxiety subscales). In

addition to the Total Anxiety scale, the AMAS-C also has four anxiety subscales: Physiological

Anxiety, Social Concerns/Stress,Test Anxiety, and Worry/Oversensitivity. The

Worry/Oversensitivity subscale (12 items) reflects excessive worrying, nervousness, or

hypersensitivity to stress. The Test Anxiety subscale (15 items) assesses anxiety associated with

taking college exams. The Physiological Anxiety subscale (8 items) evaluates physical responses to

one's anxiety. The Social Concerns/Stress subscale (7 items) assesses one's concerns about the views

of others. The AMAS-C has a Lie scale (7 items). The Lie scale describes ideal behavior and serves

as a validity index on the AMAS-C (Reynolds et al., 2003d).

**AN OVERVIEW OF INDIAN TESTS OF ANXIETY**

**HISTORICAL PERSPECTIVE**

Before 1947, psychological tests in India were mainly adaptations of foreign tests. During 1947 to

1962, many Indian tests were developed ( Asthana, 2011).Test of anxiety was developed for the first

time by Sinha in 1961 (Sinha, 1961).Over the years there have been many serious efforts in the field

of anxiety - testing e.g. Hundal and Kaur (1972), adapted Cattell's IPAT anxiety test, Nijhawan

(1972), adapted Sarason's Test Anxiety Scale for children and adaptation of Spielberger's State Trait

Anxiety Inventory (Spielberger et al, 1973), as reported by Sinha (1992).In 1967,Taylor's Manifest

Anxiety Test was adapted by B. N. Singh, as reported by Krishna,(2004). In 1969, A comprehensive

Test of Anxiety was developed by Sinha ((Sinha,NLEPT,2014), Asthana ( 2011).

Many tests have been developed to measure the anxiety level, types of anxiety, sources of anxiety

etc. of children in India. Some well – known ones are Nijhawan's (1972) adaptation of Sarason's

General Anxiety Scales for children (GASC) and Test Anxiety Scale for Children (TASC) in Hindi

and Punjabi. These scales are simple, easy to score and have been used reliably in research studies.

GASC has been used in many ways, but TASC has been used to assess the level of anxiety before

any scholastic or achievement performance test (Nijhawan, 1972). In 1982, GASC was developed for

6th to 8th grade students, in Hindi by A. Kumar (Kumar, NLEPT,2014). Thakur's (Thakur and Thakur,1984), Death Anxiety Scale was used to assess anxiety level of children associated with the

concept of death. Academic Anxiety Scale for Children was developed in Hindi by Singh and Gupta

in 1986. All the above tests are similar in nature and are not drastically different ( Satpathy, 2009).

**INDIAN ANXIETY TESTS**

**SINHA'S COMPREHENSIVE ANXIETY TEST (SCAT) BY SINHA (NLEPT,2014)***: It is a test available both

in Hindi and as well as in English. It covers five levels of anxiety. The test contains 90 items of

manifest anxiety. It is 15 to 20 minutes test, easily administrable and scorable.

**SINHA'S ANXIETY SCALE BY SINHA (1968, NLEPT,2014):** This is an another test on anxiety consisting

of 100 items, all in positive form, taken from the following areas :

i) Health, appearance and injury

(ii) Area of ambition

(iii) Family anxieties

(iv) Friendship and love anxieties

(v) Social relationship and approval

(vi) Worries of future.

(vii) Worries of civilization, war, virtue

(viii) Guilt or shame

(ix) Physical and psychological manifestation

(x) Psychological manifestations.

**INDIAN ADAPTATION OF SARASON'S GENERAL ANXIETY SCALE FOR SCHOOL GOING CHILDREN BY KUMAR**

**(NLEPT, 2014):** This is a test in Hindi, widely used with school children of both sexes. The scale

contains 45 items related to varied life situations like health, physical appearances and injury, success

and failure in work, afraid of animals and strange things, social relations and approvals, working

regarding family members, worries and future happenings and afraid of loneliness which antiquates

dangerous and painful consequences.

**INDIAN ADAPTATION OF CATTELL'S (CATTELL AND SCHEIER, 1963) IPAT ANXIETY SCALE BY HUNDAL AND**

**KAUR (1972):**It is a very convenient and practical measure of anxiety level. It is constituted on the

basis of 5 principal, 16 personality factors namely emotional stability, suspiciousness, guilt

proneness, low integration and tension. It is for 16 years to adults. It is a widely used test with adults,

college and high school children.

**ACHIEVEMENT ANXIETY SCALE FOR CHILDREN BY PANDIT, (NLEPT,2014):** This scale is designed of

measure fear of failure as perceived by the students due to perceived inability to perform better as an

academic front. It provides a measure of psychological, social and psychological problems due to

perceived failure in school situations. The list contains 35 items with no time limit.

**ACADEMIC ANXIETY SCALE FOR CHILDREN BY SINGH AND GUPTA (1986):** It is a brief scale of 20 items

and is meant for school children of class 8 to 10th (age 13-16 years). It measures academic anxiety.

**DEATH ANXIETY SCALE BY DHAR ET AL (NLEPT, 2014):** It is a test with 10 items with yes or no

answers. It measures the degree of death anxiety. It is reliable and valid list to measure the death

anxiety. Marks are available on the subjects between 25-55 years.

1. **JOB ANXIETY SCALE BY SRIVASTAVA AND SINHA (1977) :** This a scale to evaluate job related

anxiety. The scale comprises of 80 items which reveal employees anxiety being manifested in

the context of the following seven components of the joba)

Job security and safety

b) Recognition

c) Human relations at work-related

d) Reward and punishment

e) Self-esteem and self-image

f) Future prospects

g) Capacity to work.

**NEED OF THE STUDY**

In the digital and fast-paced life of today, the most affected and threatened are the youth. Anxiety

effects their mental and physical health. This in turn effects their academic performance, their

adjustment. Undergraduate university students have anxiety about their career, future, appearance,

friendship, money, desire to be the best, have the best and so on. There is tension and worry in their

minds, about almost all things that make up their lives.. Since their education and health is at stake

and they are the immediate future generation, it has become very important, to know their level of

anxiety.

A review of the tests of anxiety shows that in India, they are either adaptations of foreign tests or they

measure some particular type of anxiety – like academic anxiety, death anxiety, job anxiety etc.

There are tests for levels of anxiety of school children, but not for undergraduate students, except for

DurganandSinha (1961), who constructed the first test in India to measure the level of anxiety in

university students, in Allahabad. Three decades later, he reviewed anxiety tests including his own

test and found that no serious effort had been made either to review his test or construct other tests

for the university student population (Sinha,1992). So, to bridge this gap and study the anxiety level

of present day students, the need arose to construct an anxiety test for them. The change in the

academic and social environment of students, it was felt, would further throw light on the state of

anxiety today.

**INTRODUCTION**

Anxiety is a normal human emotion. In moderation, anxiety stimulates and acts as a motivator..

Anxiety is a psychological and physiological state characterized by cognitive, somatic, emotional,

and behavioral components (Seligman et al. 2001). These components combine to create an

unpleasant feeling that is typically associated with uneasiness, apprehension, fear, or worry. Anxiety

is a generalized mood condition that can often occur without an identifiable triggering

stimulus. Assuch, it is distinguished from fear, which occurs in the presence of an observed

threat. Additionally,fear is related to the specific behaviors of escape and avoidance,

whereas anxiety is the result ofthreats that are perceived to be uncontrollable or unavoidable (Ohman, 2000).

Another view is that anxiety is ''a future-oriented mood state in which one is ready or prepared to attempt to cope with upcoming negative events" (Barlow,2000),suggesting that it is a

distinction between future vs. present dangers that divides anxiety and fear. Anxiety is considered tobe a normal reaction to stress. It may help a person to deal with a difficult situation, for example atwork or at school, by prompting one to cope with it. When anxiety becomes excessive, it may fallunder the classification of an anxiety disorder. The intensity and reasoning behind anxiety determineswhether it is considered a normal or abnormal reaction. (Viyas et al., 2008).

**NEED OF THE STUDY**

In the digital and fast-paced life of today, the most affected and threatened are the youth. Anxiety

effects their mental and physical health. Since their education and health is at stake and they are theimmediate future generation, it has become very important, to know their level of anxiety.

A review of the tests of anxiety showed that in India, they are either adaptations of foreign tests orthey measure some particular type of anxiety – like academic anxiety, death anxiety, job anxiety etc.

DurganandSinha(1968), constructed the first test in India to measure the level of anxiety in university students, in Allahabad. Three decades later, he reviewed anxiety tests including his owntest and found that no serious effort had been made either to review his test or construct other testsfor the university student population. No Likert type scale had been constructed to measure the level of anxiety, especially of graduates, who are in the transitionary period from the protected life ofschool to higher education. So, to bridge this gap and study the anxiety level of present day students,the need arose to construct an anxiety test for them. The change in the academic and socialenvironment of students, it was felt, would throw light on the state of anxiety, as it is experiencedtoday.

**Problem : 'Development of an Anxiety Scale for Students'.**

**OBJECTIVES:**

1. To develop an anxiety scale for undergraduate students.

2. To find out the reliability and validity of the anxiety scale for undergraduate students.

3. To standardize the anxiety scale for undergraduate students

**Operational definitions of terms used**

**Anxiety:**

'Anxiety is an unpleasant feeling, caused due to the competitive environment, societal pressure,

friendship with the opposite sex, worry about the future and the resultant psychological

manifestations, in the individual'.

**Scale** : A tool consisting of items under different dimensions, to measure the anxiety

levels of students.

**Students:** Students of first year regular courses, studying in the main campuses.

**University**: delhi ( D.U.) and AIIMSThe study was carried out in New delhionly.

**Research MethodologyArea of the Study:** The study was conducted innewdelhi.

**Research Design:** The present study belongs to the category of descriptive field survey type of

research.

**Population:** All first year undergraduate students of regular degree courses, studying in the main

campuses DU and aiims

**Sample :** 826 first year students were taken as the sample fromDU and AIIMs. There were 400

students from AIIMS(123 boys and 277 girls). 426 students of DU. (266 boys and 560 girls)

participated in the study.

**Sampling Type:** Purposive Sampling**Method of Scale Construction**

**Procedure :** The study was conducted in three phases. Each phase was further divided into steps.

**PHASE I (Qualitative Analysis)**The first phase of the study, was qualitative in nature. It covered the first objective :

**Objective 1. To develop an anxiety scale for undergraduate students.**

The above objective was fulfilled through the following steps:

**STEP 1**

**EXPLORING THE VIEWS OF UNDERGRADUATE STUDENTS, ABOUT ANXIETY.**

To find out the views and understanding of undergraduate students, about the construct anxiety, anopen – ended questionnaire was developed, to elicit written descriptive data..

This questionnaireconsisted of the following questions:-

1. What do you know about anxiety ?

2. Today why do you think students are anxious or feel anxiety?

3. What do people do when they are in anxiety ?

This questionnaire was administered on a sample of 210 students.

**STEP 2**

**GENERATING POOL OF ITEMS**

The next step was to create an item pool, so after collecting the answer sheets , the responses to each

question were analyzed with the help of experts :

On the basis of the analysis, items were generated.

The items were framed keeping in mind, Edward's (1967) informal criteria of framing items.

Items under similar themes were grouped together.

Thus a pool of items was created.

**STEP 3**

**IDENTIFYING DIMENSIONS**

Items under similar themes were grouped together.

Dimensions were identified.

Extreme behaviors were avoided.

Dimensions with less than 3 items were rejected.

The term anxiety was defined.

Each dimension was defined.

Finally a pool of 97 items was created.

**STEP 4**

**CONSTRUCTION OF ITEMS**

With the 97 items finally selected, a 5-point Likert scale was created.

**PHASE II (Quantitative Analysis)**

Phase II, of the study was quantitative in nature. It was carried out in two stages:

⬝In Stage 1 the 97- item anxiety scale data was analyzed. It had two steps.

⬝In Stage 2 the (final) 50- item anxiety scale data was analyzed. It had five steps.

The two stages, covered the second objective :

**Objective 2.To find out the reliability and validity of the anxiety scale for undergraduate students.**

**STAGE 1**

**ANALYSIS OF 97-ITEM ANXIETY SCALE**

The constructed scale of 97 items was now administered on a sample of 203 students

**STEP 5**

**ITEM ANALYSIS OF THE 97 ITEM SCALE**

The data obtained was evaluated for the psychometric properties of the constructed scale, though the

following:

⬝**Descriptives**– This resulted in removing 39 items. So now the scale consisted of 58 items.

On the feedback of students and resultant expert consent and consensus, 4 more items were

removed. The scale was now a 54 item scale.

⬝**Discimination Index :**

**(iii)t-test** – On the basis of the t-test,4 more items were removed, resulting in a 50 item scale.

**(iv) Correlation**- No item was removed, as all were significant at the 0.01 level.

**Difficulty Index was not considered as this was an anxiety scale.**

**STEP 6**

**RELIABILITY OF THE REMAINING 50-ITEM ANXIETY SCALE :**

**Cronbach's Alpha (1951) =** 0. 900.

**Split- Half =** 0.940

**STAGE 2**

**Analysis of 50-Item Anxiety Scale**

For further analysis of the finally constructed 50 item scale, it was administered on

a sample of 826 students, 400The data thus

collected was analysed:

**STEP 7**

**ITEM ANALYSIS OF THE CONSTRUCTED 50 ITEM SCALE :**

Descriptives

Discimination Index :

**(v) t-test**

**(vi) Correlation**

No item was removed through the above analysis ,as all the items were found to be

significant.

**STEP 8**

**RELIABILITY OF THE 50 ITEM SCALE**

After item analysis of the 50 item scale, its reliability was calculated through :

**Cronbach's Alpha** = 0.890

**Split – Half Coefficient =** 0.881

**Test-Retest** – This was calculated on a sample of 173 students, 85 and 88

. The correlation obtained was = 0.958.

**STEP 9**

**VALIDITY OF THE 50 ITEM SCALE**

So, this Scale 1 (Anxiety Scale Students), was administered with three other

scales, to check its validity. These scales were :

Janet Taylor's Manifest Anxiety Inventory ( 1953) – Scale 2

Zung's Anxiety Inventory (1971) –Scale 3

Sinha's Anxiety Test ( 1968) –Scale 4

The correlation between all the tests, was found significant at the 0.01 level.

**STEP 10**

**FACTOR ANALYSIS OF 50- ITEM SCALE**

After item analysis, and finding out the reliability and validity of the anxiety scale for

undergraduate

students, its factor analysis was done, to find out the dimensions (factors) and the items that came

under them, through SPSS.

The factor analysis resulted in 15 factors, out of which, 5 factors had less than 3 items, so to best

represent and interpret the items, the expert panel was consulted. With their consent and consensus, a

five factor solution was found to be the best. A Scree Plot was drawn, which showed that the 5 –

factor solution was most appropriate.

**STEP 11**

**DIMENSIONS IDENTIFIED**

The factor loadings from the rotated component matrix, resulted in the following factors/dimensions

and items in each of them:

1. Psychological Manifestations = 15

2. Worry about the Future = 10

3. Competitive Environment = 12

4. Societal Pressure = 08

5. Friendship with the Opposite Sex = 05

Total = 50

A new dimension was identified- that of friendship with the opposite sex.

**PHASE III (Quantitative Analysis)**

The third phase of the study covered the third objective :

**Objective 3. To standardize the Anxiety Scale for Undergraduate Students.**

**STEP 12**

**CONVERSION OF RAW SCORES INTO Z-SCORES** - For the calculation of norms, z-scores were computed for

each raw score.

**STEP 13**

**DETERMINATION OF NORMS**

After calculating the z-scores for all the raw scores, the range of z-scores were divided into three

levels, according to their corresponding raw scores.

**STEP 14**

**LEVELS OF ANXIETY IN THE SAMPLE**

The frequencies of each raw score were evaluated. From this data, the number of undergraduate

students having different levels of anxiety in the sample, were tabulated.

**Findings of the Study**

1. The constructed Anxiety Scale of Undergraduate Students, having 50 items ( N = 826 ), was

highly reliable.

2. Inter- item correlation was high as- Cronbach Alpha was 0.890 and Split – Half Coefficient was 0.881.

3. Item –total Correlation was significant at the 0.01 level.

4. Test-retest reliability was 0.958.

5. Validity was high as the coefficient was significant at the 0.01 level, with 3 other

standardized scales of anxiety, viz. Taylor's Manifest Anxiety Scale, Zung's Anxiety Scale

and Sinha's Anxiety Scale.

6. Factor analysis identified 5 factors-.Psychological Manifestations (15 items), Worry about the

Future (10 items),Competitive Environment (12 items), Societal Pressure (08 items) and

Friendship with the Opposite Sex (05 items).

7. Norms (using z-scores), revealed thati.

199 students experienced high anxiety, i.e. 24.09%

ii. 496students experienced normal anxiety, i.e. 60.05%.

iii. 131 students experienced low anxiety, i.e. 15.86%..

**Delimitation of the Study**

1. The study was carried out in delhi and new delhi only.

**Educational Implications of the Study:**

Findings of the present study indicate that a fairly large number(about one-fourth) of student

.students, experience high anxiety in diverse areas like studies, job,

career, society, friendship with the opposite sex and about the future, so –

1. Through proper guidance and counseling, of the students, the area their anxiety

should be found out, to find solutions to their problems.

2. There should be adequate and proper co-curricular and extra curricular activities, to provide

respite from the humdrum curriculum.

3. The teachers should create a relaxed, educative atmosphere, that does not put pressure on the

students.

4. The university administration should also help create a peaceful atmosphere on the campus.

5. The parents of the students, should have harmony at home and a warm and caring relationship

among the family members.

6. This study will be helpful in using interventions to reduce the students' anxiety, must begin

from the time they enter higher education.

7. The study will give direction, as to how to make useful orientation programmes, that make

students aware of situations they might encounter, which, if not handled wisely, might lead to

difficulties, leading to anxiety.

8. The study will contribute to framing the content of workshops, seminars and conferences to

educate the students to use the internet, mobiles, applications provided by digital services, etc.

judiciously, to protect themselves from anxiety prone situations.

9. The study will be helpful in making the students realize the value of Yoga and physical

excercises. They are like fuel for the body machine, so must be regularly indulged in, under proper supervision, of educators.

10. The study also shows the urgency of other interventions like music therapy and spending time

in hobbies, to get rid of unwanted anxiety. These faculties may be provided in the campus.

11. From the present study, it s concluded that the students' anxiety can degrade their academic

performance, therefore, their apprehensions about - jobs, career, friends and the future- need be

cared for through their education.

12. The study reveals that universities need to attend to this problem, not only of high anxiety, but

also of low anxiety also. The latter results in students taking risks without bothering for consequences, being irresponsible, careless and sluggish.

13. The study will contribute to enhance the teaching- learning process.

14. The study will contribute to the education system in dealing with the anxiety problems of

students.

15. The study will help in measuring the anxiety levels of students and help in identifying the causes which may be studied and removed.

16. The study will help the students to be better students and citizens of the country and the world.

**SUGGESTIONS**

1. The study can be on the basis of gender

2. This study was on students only, so it may include other graduates and other

levels in higher education student

3. The study may be on school and primary children.

4. The study can be on the anxiety levels of teachers.

5. The parents of university and other levels of education can be done.

6. A comparison may be made of anxiety in open and other universities.

7. Cross- cultural studies of anxiety of Indian students and foreign can be done.

8. The study was limited to Allahabad only. It could be compared across districts.

9. The study can be in other states of India and a comparison can be done.

10. A large sample may be taken, to further study the variables and construct of anxiety.

11. A study of professional and non-professional youth may be done.

12. A study of anxiety of parents and the academic performance of their offsprings can be done.

13. The anxiety scale may be administered in successive yrs. or different sessions and the results compared.

**ANXIETY SCALE CONSIST OF**

A survey research is being conducted on the problems of youth. You need not write your name in theanswer sheet if you do not wish to. Please read these statements very carefully and then indicatewhether you strongly disagree, disagree, are undecided, agree or strongly agree and answer sincerelyaccording to your personal feelings. No answer is right or wrong. Do not leave any statementunanswered. Your answers will be kept strictly confidential and used only for research purposes.

Your cooperation will help in knowing your problems. Thank you.

1.Name ........................................................

2.Age ................

3.Gender Male\ Female

5.Institution..........................................................................................

A- Strongly Disagree B- Disagree C- Undecided D- Agree E- Strongly Agree

A B C D E

1 I worry about the future.

2 I am worried that I am unable to decide what to study.

3 I fear possible misfortunes.

4 I am often tense.

5 I hesitate in talking to strangers.

6 From where to get money for today's costly living, worries me.

7 I worry about my appearance.

8 The desire to obtain everything fast, disturbs me.

9 I do not like being compared to my classmates.

10 Even small things make me cry.

11 I am in anxiety that problems might never leave me.

12 I feel afraid I will be unsuccessful.

13 I fear serious diseases.

14 I get angry soon.

15 I feel nervous I might not be able to complete my work on time.

16 The high cost of coaching worries me a lot.

17 My studies are a big burden for me.

18 I am worried that jobs are less and jobseekers more.

19 I feel like leaving everything and going far away.

20 I worry that others might deceive me.

21 Doing many things at the same time, makes me nervous.

22 I am in anxiety when I get poor marks in a test.

23 I feel that people do not like me.

24 I do not like talking to others.

25 I feel that all are looking at me alone.

26 I am not able to share even small things with my friends.

27 I am tense that there are differences between my parents and me.

28 I am unable to decide which subjects I should take.

29

I worry whether my family will accept my friend (opposite

sex).

30 I am not able to sleep.

31 The increasing number of competitions makes me nervous.

32

Any interference in my friendship with my friend (opposite

sex) disturbs me.

33 I worry that I am not able to take out proper time for study.

34 Due to anxiety my important work is postponed.

35 My parents' desire to push me, gives me great pain.

36 I worry my parents do not have time for me.

37

I am disturbed if my friend(opposite sex)pays attention to

someone else.

38 I am easily hurt by others.

39 I worry that there is a lot of work and very less time.

40 I shout at others.

41 I do not feel hungry.

42 Not talking to my friend (opposite sex) for a long time makes me

tense.

43 I fear that my friend (opposite sex) might deceive me.

44 I am worried I am not able to adjust with my environment.

45 I worry whether I will get a good job even after studying so

much.

46 I am worried I might not earn well in my job.

47 I get more excited than is necessary.

48 I am disturbed others might make fun of me.

49 I yearn for luxuries.

50 I like to remain alone

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