

Construction, Validity And Reliability of Pre University Students Stress Inventory

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ABSTRACT

The study aims to build, and acquire content validity and reliability of Pre University Students Stress Inventory. The Pre University Students Stress Inventory's questionnaires aim at measuring the stress that students at the Foundation Level, Matriculation, Form Six and Pre University students in all Public Universities and Private Institutions of Higher Learning Suffer. Its theoretical basic is based on the theory of Reality by William Glasser (1965). It contains 42 items divided into 5 subscales. These subscales are categorized as follows: subscale 1, the desire for survival, sub-scale 2, the sense of belonging, sub-scale 3 is the desire for power, sub-scale 4 is the desire for freedom and sub-scale 5 is the desire for pleasure. Pre-University Students Stress Inventory content validity was assessed by 7 experts consisting of five lectures and two counselors. The pilot study involved 50 subjects made up of students at a Matriculation College as samples to check for reliability and validity.. Reliability value is .820 while the validity value is 0885 (88.5%). With these readings of the instrument's reliability and validity, this study has been able to come up with a Pre-University Students Stress Inventory for use in the field of psychology in Malaysia.

Keywords: Validity and Reliability, Pre-University Students Stress Inventory

Introduction

Stress is defined as a situation that manifests or exhibits restlessness, anxiety, tension and other unsavoury states of existence as a result of mental or physical stress (Kamus Dewan 2005, p. 1526). According to Angela (2009), stress refers to a reaction of the body to change that requires adjustment of emotional, physical or mental states. Generally, stress is part of life and it can cause negative effects (distress) and positive effects (eustress). However, too much stress will lead to depression and physical illness (McGeorge, Samter & Gilihan, 2005).

Lessard (1998) found that stress is not only experienced by adults, but also experienced by university students. This is because the university is a unique environment that often requires students to balance a variety of roles and tasks to be performed by them. If not



successful, they will be susceptible to stress. Thus, the phenomenon of stress among university students is a topic that is often the subject of study of most researchers.

There are many factors that can cause a student to experience stress. College and university students in the early years of study are very susceptible to stress caused by the transition process in the university life (Towbes and Cohen, 1996). This scenario can be seen when there students who demonstarted academic excellence when they were at school fail to perform equally well when they are at the university. Intense competition in the pursuit of academic excellence may be accused as providing high pressure to the students to realize their vision.

Stress has become a frequent topic of discussion in the academic environment and community (Joseph & Henry, 2009). Identified stress factors among students included the transition to matriculation or university from school to the world of self-oriented learning. Homesick syndrome or homesickness, among first-year students (Pfeiffer, 2001) dealing with the challenge of adapting to a new environment failing which would bring stress to them.

Nowadays, stress is a problem often encountered by students. Ongoing stress can affect a person's ability to get things done. There are many factors that cause stress to occur among students. Among the factors are the terms of the learning environment, family and student environment itself.

In addition, factors such as the environment, career competition, interpersonal relationships and ways of thinking of students could also contribute to stress among students. Thus, stress is inseparable with their students' busy lives] in their studies and in acquiring a variety of skills at the university. There are students who are capable of dealing with stress without having any effect on their physical, mental or negative emotions and they can motivate themselves. There are also students who are unable to manage stress when they are in college or university. Stress exceeding a certain level, if not controlled, it will create multiple problems for each individual (Romas and Sharma, 2004).

Normally, stress will be experienced in a variety of conditions such as a sense of loneliness, lack of sleep, anxiety, high anxiety and physiological symptoms that indicated the impact of an event experienced (Wright, 1967). Consequently, stress can impact a person's life and daily interactions of affected students negatively that the effects are possibly seen in their health, personality, social interaction and academic achievement.

Stress can also be caused by a learning situation, especially for exams, when waiting for the results and the work they are required to do in the course taken (Pfeiffer, 2011). In addition, most students want to maintain a good academic record and intense competition has an impact, that is, causing stress to the students to achieve their goals (Macdonald et al., 2007). This is because, most of the students have high expectations of their needs and desires. Among other forms of stressor that is life as a student in college are life as an individual who will step into adulthood, job seeking, a spouse or partner conflict, and stressors related to academic achievement. This statement is also in line with studies carried out by Shaher (2009).



Background Of Pre University Students Stress Inventory

Pre University Students Stress Inventory is a stress measurement instruments built on Reality Theory introduced by William Glasser, a psychologist in California in 1965. The theory of reality outlined some concepts, particularly in relation to the needs and desires of mankind which are related to the concept of basic human needs (needs) such as the need to have a sense of belonging and because it is important to establish a relationship of humanity. There are three environments that involve feelings of belonging which are directed to the family, society and the workplace. But achieving this purpose requires strategy and proper planning.

In addition, typically the human development process should be characterized by brisk activities and covers every requirement of human development. In order to produce the best, freedom is important for every individual. Individuals need the freedom to move positively towards a desired life. Therefore, man is willing to sacrifice for freedom and independence.

In addition, the needs of survivors and survival required by each individual also includes food, accommodation, families and children. However, the concepts related to the human will is an insistence that brings people to move and act towards fulfilling basic needs. Although the same basic human need but the will of man is unique, distinctive, intended for self-satisfaction, contain a specific response to the needs and expectations of the foundation is to be achieved and is subjective. The need to have fun and to enjoy is required by each individual. Typically the process of human development should be characterized by activities that delight and covers every requirement of human development.

According to this theory, people become troubled when their wishes are not met. Psychological and physiological needs (love and be loved, appreciation, freedom, joy and survival) affect desire. Conflicts arise when individuals get what they do not want. It can create self-pleasure or pain to the individual. Behavior, thoughts, feelings and physiology of individuals affected by conflict. An Individual facing failure is usually disappointed with life and always denies that he faces fiasco. He will choose the negative symptoms and eventually performs ineffective behavior. Failed personalities will escape from responsibility after the emotions and thoughts are interrupted.

Among the characteristics of individuals who have the identity of the city is constructive, decisive, altruistic, always feeling positive, happy, receiving positive self, think rationally, to approach the problem in a reasonable, careful, mature, focused on healthy activities such as recreation, have a sense of freedom, fun, feel loved and to love, a sense of efficiency and self-respect. Identity of individuals acting to produce satisfaction, positive mood and shape our thoughts, feelings, actions, needs and goals are positive.

The identity of individuals who failed to achieve their basic needs and requirements Individuals who fail to achieve basic needs and tend to either reject or accept the reality. Individuals who fail to accept the reality will better meet the needs and basic needs and shape our thoughts, feelings, actions, needs and goals that will be born positive and victorious individual identity.



Literature

The results show that stress can affect the academic performance of university students (Shaher 2009). Studies done by Agolla and Ongori (2009) on undergraduates at the University of Botswana show that the burden of academic, inadequate resources, low motivation, compact lecture rooms and unexpected circumstances at a secured job after graduation is driving to stress among students.

In the study of Ball, Sharifah Muzlia and Mosselle (1999a) on the Malay College, 392 students aged between 17 and 20 years showed that the students involved in the study admitted to being able to handle stress effectively. Symptoms of stress are significant and the most frequently reported such as depression, headaches, insomnia, loneliness, longing to the family (homesickness) were extreme, and these manifested in an increase in the number of smoking activity. The study also showed that the most influential source of stress on student is a daily confrontation as students, including academic assignments, feeling unsure whether a field is taken to ensure a good future and family conflicts that are not resolved.

A study by Suriani and Suraini (2005) conducted among 94 students at Universiti Pendidikan Sultan Idris found the sources of academic stress to be lecturer, private and university experienced by over 70 per cent to 91 per cent, while the source of the stress-related extra-curricular activities which were friends, family and parents suffered by approximately 60 percent to 70 percent of students. However, the cause of academic stress were due to too much work, not enough time to revise, scoring weak in tests difficulty to understand the subjects taught, could not answer the questions posed by the lecturer, pending examination and could not focus and pay attention to education.

A study at a university in Sabah by Ferlis, Balan and Rosnah (2009) also showed a significant relationship between overall stressors and student stress. Based on the data obtained, there are four aspects that cause students stress, namely physical, academic, lecturer, and friend.

The study of stress in a learning environment which was conducted by Deckro, et al. (2002), shows that stress affects academic achievement, causes disappointment, degenerates physical health and brings forth the idea of suicide. The negative effects of this stress will prevent students from achieving the desired goals. Students who are weak in studies are stressed. If stress is not addressed and the student is found to be wrong, he would choose activities that will fail more often than other students (Brewster, 2001).

Azhar M. Zain (The Straits Times, March 6, 2002), said that about 25 to 35 percent of students in this country suffer from depression as a result of the increasing burden of studies. According to him, the education system that promotes excellence in academic results of students, causes them to not have time to rest and be involved with other activities. While pressure from parents and their teachers to perform well in school causes students to have to cope with stress in their lives.

A study conducted by Najib, Che Su, Zarina and Suhanim (2005) among a total of 1,923 students of Universiti Utara Malaysia (UUM) found a significant relationship between workload and academic stress experienced by students. This means, the more the tasks undertaken by



students, the higher the students' academic stress. According to them, the students usually have a lot of tasks that must be carried out during any one semester for each course. So indirectly, the burden they have to carry contributes to higher stress. In addition, their study also found that there is a relationship between self-esteem and academic stress. In other words, the lower the self-esteem, the higher the academic stress experienced.

A study conducted by Asmawati (2006) on academic stress and reaction to cause stress among students of Universiti Kebangsaan Malaysia found that the three main causes of stress are frustration, a sense of burden and pressure. The study was also conducted by Redhwan, Sami Karim, Chan and Zaleha (2009) on students in Management and Science University, Shah Alam. Among the causes of stress that the students faced are lack of sleep, financial problems and family problems.

Student stress caused by stressors experienced was also related to the results of examinations. In a study conducted by Najeemah (2005), it was found that there was a significant positive relationship between mind stress, physical stress, social stress, and stress on the whole with results of examinations. This means that the higher the stress, the lower the results of examinations.

The Theoretical Basic Construction of Pre University Students Stress Inventory

According to William Glasser (1965), men work on stage or state of consciousness without being affected by the power unconsciously. In every human being there is a healthy boost. The drive consists of two stages, namely physical and psychological. In physical form, this drive is a necessity which includes food, family and accommodation. Humans are also affected by the desire for survival. If these requirements are not met, the individual will feel stressed and shall be struggling to survive.

The psychological form, meanwhile, consists of four groups

a. Feeling the need to have and possess (belonging)

This is a basic requirement in order for individuals to find and create a human relationship. Without bonding and interaction, individuals will always be overshadowed by feelings of loneliness. This sense of belonging to such a requirement to friends, family and love. When the individual feels himself not given attention, the caresses and affection from family and friends, then this person will feel stressed.

b. The need for power (power)

This requirement is self-esteem, respect and competition that exist between individuals and groups in the vicinity. The need to reach to out to an individual is also the needs to clearly demonstrate the power and the desire to be recognized. Individuals will feel stressed if he is not rewarded and recognized in every business he engages in. These individuals will continue to compete for the award because of the power and self-esteem is a vital necessity for him.

c. The need for freedom and independence (freedom)



According to Glasser, individuals need to feel free and independent internally in order to be able to produce the best results out of him. Individuals continue to move in a positive direction towards the life they want. Individuals will feel freedom if all their desires could be fulfilled and [they are] independent in making choices and decisions. If this person is not given the freedom to make choices and decisions, then this individual will experience stress.

d. The need to have fun and have fun (fun)

This is a desire to have fun like play, relax and laugh. Glasser asserts that the individual learning process must have the characteristics or activities encouraging fun. Pleasure in learning can be enjoyed by students if the need to play, relax, laugh and be happy can be met.

According to Glasser, there are two main types of identity in the reality of identity successful and the identity failed. Identity successful refers to an individual acting in a responsible way to achieve the requirements and basic needs. These actions resulted in satisfaction and positive feelings and shape his thoughts, feelings, actions, needs and goals to be positive.

While the identity of the failed refers to actions by unscrupulous individuals to achieve the requirements and basic needs. These actions resulted in negative feelings and satisfaction and shape our thoughts, feelings, actions, needs and goals to be negative. Individuals who have failed to represent the identity of individuals who failed to achieve basic needs and wants and then deny reality and have no sense of responsibility that shape our thoughts, feelings, actions, needs, goals were negative. Individuals who live in the identity of the failure will be plagued with stress in their lives.

Purpose of Review

The aim of the study is to determine the reliability, face validity and content validity of the questionnaire for Pre University Students Stress Inventory. This study specifically aims to:

- 1. Build the guestionnaire based on the literature review.
- 2. Determine the value of overall content validity of the questionnaire through expert assessment.
- 3. Determine the overall reliability of the questionnaire I through alpha coefficient analysis.
- 4. Determine the reliability of the subscales of the questionnaire through alpha coefficient analysis.

Administration and Interpretation of Score

Phase 1: Construction

Phase 2: Ensuring Face Validity and Content Validity

Phase 3: Analysis of Reliability

Phase 1: Construction of Pre-University Students' Stress Inventory

Part A: Personal Information From Respondents

This section contains items that are intended to get background information on the respondents. Background information on respondents is sorted by categories and rated within



each category. The respondents must choose one of the options given by indicating in the space provided. Each item in this section is measured at nominal level and no score is given.

Part B: Stress Instrument

This instrument has been designed by the researchers based on the Theory of Reality. The Stress instrument contains 42 items consisting of positive and negative items. The construction of this instrument is based on five sub-scale in the theory of reality that is suitable for measuring stress of pre-university students. Respondents are given a choice of answers according to the four-point scale for each statement, namely:

 Very True
 : 4

 True
 : 3

 Less True
 : 2

 Not True
 : 1

Phase 2: Ensuring Face Validity And Content Validity

In phase 2, Face Validity is verified in advance by a language teacher before the researchers ensure the content validity. The researchers have consulted a panel of seven experts consisting of academics who are lecturers and counsellors from the Faculty of Education and Human Development, counseling practitioners consisting of officers of registered psychologists and counselors. Othman (2004), expressed the opinion that the appropriate amount for the validity is six to nine assessors.

Phase 3: Analysis of Reliability

The Pre University Students Stress Inventory was constructed by the researcher. Before the real research was conducted, a pilot study was conducted on 50 students of a Matriculation College to assess the validity and reliability of the items in the questionnaire and determine the extent to which the respondents understand the items presented. It was determined that the cronbanch alpha value is .820. If the Cronbach alpha values obtained exceed 0.8 shows all items may be accepted as an item that can measure what you want measured. A pilot study was conducted as a guide to repair items that are poorly understood before the actual study was carried out.

Subject And Place Of Study

The subject study involved a panel of seven experts comprising of three lecturers from the Department Of Counseling Psychology, UKM and UPSI. The remaining four are practitioners of Counseling In Public Service Department (JPA), Institute Of Teacher Education (IPG), Psychology And Counselling Division (BPsK), Ministry Of Education Malaysia. A Language teacher was selected to check for face validity. In addition to the panel of experts, a total of 50 students from the Pahang Technical Matriculation College were randomly selected to test the reliability of the Pre University Students Stress Inventory.



Findings

Findings Phase 1: Construction Scale, Scale and Sub Item Inventory

The construction of the Pre University Students Stress Inventory was based on literature review and information from reference materials such as articles, books, journals and previous studies from home and abroad to obtain in-depth information related to definitions and concepts. From those sources the researchers have built the Pre University Students Stress Inventory containing 42 items which are divided into 5 subscales, namely. sub scale 1: continuity of life, subscale 2: a sense of belonging and possession, sub-scale 3: power, sub-scale 4: freedom and sub-scale 5: pleasure.

Findings of Phase 2: The Content Validity of Pre University Students Stress Inventory
The findings showed improvements that were made based on comments given by a panel of
expert evaluators. In total, seven selected experts gave positive approval to the items
presented. All of the views of the expert panel were referred to as a basis for the researchers to
make improvements the items to be measured in terms of reliability. Comments and views of
experts are set out in Table 1 below:

Table 1:

Comments and opinion to improve the validity items of Pre University Students Stress Inventory

Experts Views for Improvements:

Expert 1: Most items are straightforward. Repair if items are built implied.

Expert 2 : Some experts writing format needs to be improved. In total, these items can measure the stress in students. However, some items seemed to be misleading.

Experts 3: Items can measure what is to be measured in the study.

Expert 4 : Can refer to any instrument that is built on theories for the necessary confirmation and justification.

Experts 5: Good and relevant items and sub-scales.

Expert 6: Items that are built either on the subscales.

Expert 7: On the whole, all the items are suitable to represent the dimensions proposed. However, it is best to carry out analysis of items of value and see the spectrum normalized so that researchers can make decisions more confidently of items to be retained based on the reliability (single item vector construct outlook analysis).



Based on the comments and opinions of these experts, the researchers reviewed the items concerned and made the necessary improvements. There are items that are agreed and not agreed upon by most experts, researchers referred to the comments that have been granted and revised less relevant items and items that carry the same meaning. Overall, the experts agree that the Pre University Students Stress Inventory can measure stress in student. Majid Konting (1998) said that the validity of the measurements refers to the extent to which it is a tool used to measure the data that is required to achieve the objectives of the study.

Table 2: Value of Entire Content Validity and Sub Scale (n = 7)

SubScale	Item	Value(%)	Valuation Expert					
Overall	42	88.5	Received					
Survival	8	89.1	Received					
Belonging	8	89.4	Received					
Power	8	88.9	Received					
Freedom		8	87.3	Received				
Fun	10	87.7	Received					

Table 2 shows the overall content validity of Pre University Students Stress Inventory which totals to 88.5%. While the highest content validity is 89.4% which is a sub-scale of sense of belonging (belonging) and the lowest subscales is the sub-scale measuring freedom (freedom) (87.3%). This shows that the Pre University Students Stress Inventory has the specialist high content validity.

Findings Phase 3: Value Reliability of Pre University Students Stress Inventory

The third phase of the study was to get the reliability of Pre University Students Stress Inventory. Power derived from the pilot study were analyzed using SPSS version 20. According to Croswell (2010), reliability is often referred to in order to obtain the internal consistency of a construct. The reliability measure was obtained by using 50 subjects who are Matriculation College students from various fields to obtain data on reliability. The reliability of the findings is shown in Table 3 below:



Table 3: Value of Reliability Overview and Sub Scale SDP (n = 50)

Sub Scale	Item	Value	Interpretation		
Overall	42	.820	High		
Survival	8	.738	Average High		
Belonging	8	.721	Average High		
Power	8	.667	Average High		
Freedom		8	.754 Average High		
Fun	10	.617	Average High		

The significant level of 0.5

Discussion And Recommendations

Based on Table 3, the lowest reliability is .617, which is subscale for power. The highest reliability is .754 subscale for freedom. The reliability showed that the items were built satisfactorily.

Modifications of some items that were done after getting the views of experts improve the reliability standards established in the constructed items. This is in line with the opinion expressed by Majid Konting (1998) who stated that the coefficient of reliability of 0.60 or more is good and acceptable in an investigation.

Based on the findings, the measure of validity and reliability are good and acceptable. This proves that this inventory can be used by counselors at Matriculation Colleges, public universities, private universities and other relevant agencies. The results of content validity by a panel of seven experts show that the Pre University Students Stress Inventory includes content to be measured. The findings of the analysis of the reliability of Pre University Students Stress Inventory also prove that the five subscales of were valid.

Landis and Koch (1977) proposed a way of interpreting the values obtained using the formula Kappa Cohen, namely the reliability of more than 0.75 would indicate strong approval or would show that the consistency of coding data conducted by researchers is high. The 0:41 to 0.74 indicates a moderate level of consistency, and value under 0:40 shows poor consistency.

Although this inventory is built to measure stress in students but its use is still limited. This is because the inventory is not suitable to be administered to an individual or a student who is 18 years or younger. This means it is not suitable administered to students in primary and secondary schools up to Form 5. Some of the items in Pre University Students Stress Inventory focuses more expressly on student's life during the transition from the school to university level. The items in also use the language and attain a high level. It will likely take some time for younger subjects to answer this inventory.

This study could provide major implications for psychology and counseling in Malaysia. So far, there still very few stress inventories that are established and developed specifically to measure stress in pre-university students. Thus, the construction of this stress



measurement tool can help counselors and researchers in universities who are studying stress in undergraduates.

Future studies are recommended to embellish this inventory to produce a better version of Pre University Students Stress Inventory and will be more extensive in its use so that it can be used by all parties. The researchers also suggest further research to gain a deeper analysis of Pre University Students Stress Inventory items such as the use of factor analysis and model analysis using RASH. Similarly, as for validity, according to Fraenkal & Wallen (2011)' validity can be proven by methods such as content validity, legality forecast, concurrent validity and construct validity.

Research Contribution

Contribution to Researcher

This study was conducted to identify the factors and stress levels experienced by pre-university students. This inventory can be used by researchers in all educational organizations that involve pre-university students.

Contribution to the Faculty or University Administration

Based on the analyzed data, the results of this study can be utilized by the administration, the lecturers, the counselors and any parties involved to take the appropriate steps in addressing the stress of the students, thus, helping the students to achieve excellent academic achievement. Follow-up actions need to be planned by the relevant parties based on the resources obtained to produce a more motivated students. This study is also expected to explain the relevance of stress-related issues studied so that everyone can benefit from the development of national education which is one of the key assets of the nation.

Conclusions

Overall, this study has managed to build Pre University Students Stress Inventory and has tested the validity and reliability to ensure that they are good and acceptable. Thus, the Pre University Students Stress Inventory can be used by counselors at public universities, private universities and colleges throughout the country to measure stress of clients based on five subscales of the continuity of life, a sense of belonging and belonging, the desire for power, freedom and fun.

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