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Psychological Test Construction

Abstract

The present study is a pilot study it was conducted on 250 subjects from different areas of Gorakhpur and Lucknow city. Main aim of this study was to develop a general stress questionnaire. For develop this questionnaire preliminary draft of 94 items has been prepare and data collected on 200 subjects.

Keywords: Psychological Tests, Construction Strategies.

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Introduction

Test construction is the set of activities involved in developing and evaluating a test of some psychological function. The steps include specifying the construct of interest, deciding the test' function (diagnosis, description of skill level, prediction of recovery), choosing a method (Performance, Behavioral Observation, Self Report), designing item content, evaluating the reliability and validity of the test and modifying the test to maximize its utility.

Psychological tests are written, visual and verbal evolutions administrated to assess the cognitive and emotional functioning of children and adults.

A psychological test or measures may be viewed as a set of self-report questionnaire (also called "items") whose responses are then scored and aggregated in some way to obtain a composite score. The terms "test" and "measures" are used interchangeably in this context even though "test" are in common language, used to imply some educational achievement or knowledge test with correct or incorrect responses. In many psychological measures(e.g. attitudinal measures), there are not " correct" or "incorrect" responses per second Furthermore, the life and social sciences interchangeably with the term "questionnaire" to refer to the set of questions whose responses are aggregated into a composite score. The essential features therefore are a series of question to which correct an individual responds, and a composite score that arises from scoring the responses to these questions. The resultant set of questions together is referred to as a "scale", "test" or measure. Two types of scores can be obtained from items, but it is important to note that it is not the question format that is important here but the scoring format. Binary scores which are also referred to as dichotomous item responses, are obtained from either items (e.g. multiple choice) that are scored correct/incorrect in aptitude or achievement tests, or item (e.g. true/false, agree/disagree)that are dichotomously scored according to a scoring key in an attitude, opinion or personality scale. Ordinal item responses, which are also referred to as graded responses, Likert, Likert-type, or polytomous (the word polytomous is used to imply ordered responses and not simply multi-categories nominal responses). Items involve more than two scoring options such as a five point strongly agree to strongly disagree scale on a personality or attitude measure. For simplicity and consistency with the life and social sciences literature, the various terms denoting ordered multi-category scores will be referred to as "Likert type" throughout this piece although this deviates from the original and very strict definition of a Likert format. An interesting feature of ordinal or ordinal or Likert type scores is that, for some research purpose, they can also be re- scored in a meaningful binary fashion. The items in a test or measure are considered indicators or marker of the phenomenon under study (also called a construct or latent variable) and therefore their composite is also an indicator of the phenomenon and not the phenomenon itself.

Test construction strategies are the various ways that items in a psychological measure are created and decided upon, they are most often associated with personality tests, but can also be applied to other psychological constructs such as mode or psychopathology. There are three commonly used general strategies: inductive, deductive and empirical. Empirical test construction attempts to create a measure that differentiates between different established groups. e g. this may include

depressed individuals, or individuals high or low in level of interest. Items are traditionally constructed without expectation for how they will be answered by each group. The Minnesota multiphasic Personality inventory was initially developed using this method. This method primarily differs from the inductive method in the way items are selected. While inductive methods select items are selected. While inductive methods select items based upon validity coefficient and their ability to accurately predict group membership. However, the empirical items are selected based upon validity coefficient and their creation with inductive methods, while also having an initial item pool more likely to relate to the topic of interest ability to accurately predict group membership. However the empirical method shares many of the strengths and weakness of atheoretical item.

There are a lots of psychological test are available for stress measurement but no psychological tests are available for measure general stress. In the present time every person even children 'also in stress and mental pressure but no any appropriate measurement (questionnaire) are available which can measure general stress and mental pressure.

The cultivation of a test, generally with a concise or obvious goal to meet the typical standards of validity, dependability, norms and others aspects of test standardization.

The test construction period is talking longer than we had anticipated.

In the light of above said lack it has been plan to develop a questionnaire which can measure the level of stress of any one.

Aim of the Study

There are a lot of stress questionnaires are available for measure different types of stress (occupational stress, age, gender etc.) but no any stress questionnaire is available to measures a general stress. So aim of this pilot study is develop a general stress questionnaire.

Purpose of Test Constructions

Psychological tests are used to assess a variety of mental abilities and attributes including achievement and ability, personality and neurological functioning for children, academic achievement, ability and intelligence, test may be tools as in school placement in determining the presence of a learning disability or a developmental delay, in identifying giftedness or in tracking intellectual development. Intelligence testing may also be used with teens and young adults to determine vocational ability (e.g. career counseling).

Personality tests are administrated for a wide variety of reasons from diagnosing psychopathology (e.g. personality disorder, depressive disorder) to screening job candidates. They may be used in an educational setting to determine personality strengths and weaknesses. Personality tests are inventories to evaluate the thoughts, emotions, attitudes and behavioral traits that comprise personality.

Purpose of this pilot study is to develop a general stress questionnaire.

Steps of Test Construction

Planing of The Test

Planning of the test is the first step in the test construction. The main goal of the evaluation process is too collect valid reliable and useful data about the subjects.

The objective of this test construction is to develop a stress questionnaire which can measure the level of stress of general population due to daily and everyday hassles for this purpose a hues amount of literature has been consulted as well as various stress questionnaire which already exist are also gone through. On the basis of available literature and questionnaire a number of dimensions which cause stress has been identified financial problems, excess responsibility, relationship problems, adjustment problems, health problems, role conflict, lack of time, insecurity, work pressure. On the basis of these dimensions a stress questionnaire will develop for general stress measurement.

Preparing The Test

After planning preparation is the next important step in the test construction. In this step the test items are constructed in accordance with the table of specification. Each type of test item need special care for construction.

On the basis of above mention dimensions a stress questionnaire has been developed and items selected from self assessment.The stress questionnaire gave for study to 20 psychology P.G. students and getting responses from them. After assessment the appropriate items have been found for questionnaire then 4 instructions and 4 dimensions has been prepared.

Trying out The Preliminary Draft of The Best

Once the test is prepared now it is time to be confirming the validity, reliability and usability of the test. Try out helps us to identify defective and ambiguous items, to determine the difficulty level of the test and to determine the discriminating power of the items.

After that questionnaire gave to 10 psychology scholars and 20 subjects of general population to check the clarity of instructions and ask to them that instructions can be understood easily or there is any need to modify?

After getting the response for instruction, final 94 items for questionnaire with 4 dimensions stress intensity, stress frequency, stress importance and stress control and stress questionnaire was constructed

Evaluating The Test

Evaluating the test is most important step in the test construction process. Evaluation is necessary to determine the quality the of test and the quality of the responses. Quality of the test implies that how good and dependable the test is? (Validity & reliability).Quality of the responses means which items are misfit in the test. It also enables us to evaluate the usability of the test in general class room situation.

For checking validity of this questionnaire consult with psychology professors of Buddha P.G. college kushinagar and discuss about this

questionnaire and about all 4 instructions. When Professors checked and doing correction in this questionnaire, questionnaires has bee distributed in 200 subjects for data collection. After that I found raw data. After getting raw data I have calculate item total correlation of each items and found some significant and some non significant values. After that excision of both type of values has been done and create list of significant values on .01 and that items are found significant on all four dimensions also. I found that 77 items are significant on all four items .01.

Construction of The Final Draft of The Test

After getting the response for instruction, final 94 items for questionnaire with 3 dimensions stress frequency, stress importance and stress control and stress questionnaire was constructed.

Correlation of All Stress Dimensions

S.No.	Stress Frequency	Stress Importance	Stress Control
1	.385**	.424**	.305**
2	.297**	.326**	.258**
3	.432**	.391**	.278**
4	.384 **	.349**	.371**
5	.321**	.461**	.334**
6	.380**	.464**	.411**
7	.408**	.363**	.373**
8	.328**	.399**	.312**
9	.403**	.340**	.383**
10	.368**	.503**	.469**
11	.376**	.339**	.276**
12	.373**	.374**	.417**
13	.452**	.447**	.424**
14	.305**	.288**	.234**
15	.345**	.461**	.445**
16	.259**	.345**	.413**
17	.244**	.413**	.409**
18	.269**	.329**	.267**
19	.192**	.426**	.427**
20	.332**	.489**	.439**
21	.325**	.289**	.261**
22	.331**	.337**	.409**
23	.236**	.314**	.315**
24	.280**	.463**	.367**
25	.460**	.309**	.309**
26	.338**	.279**	.279**
27	.349**	.303**	.303**
28	.428**	.326**	.326**
29	.302**	.301**	.301**
30	.258**	.283**	.283**
31	.444**	.449**	.449**
32	.404**	.375**	.375**
33	.321**	.356**	.356**
34	.321**	.212**	.212**
35	.321**	.511**	.511**

Conclusion

In this pilot study the questionnaire of 94 items has been distributed in 250 subjects but only 200 questionnaires found return which was completely filled. After getting 200 responses statistical analysis correlation has been done.

In this pilot study result shows that some general stress factors have been found which is responsible for general stress of anybody.

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