

CONSTRUCTION AND STANDARDIZATION OF LIFE SATISFACTION SCALE FOR COLLEGE OF TEACHER EDUCATORS

Research Scholar

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Abstract

*Conceptual and research based literature related to life satisfaction scale construction and educational psychology topics were studied thoroughly for developing life satisfaction scale n Educational Psychology. The preparation and standardization of the scale consisted of four major phases such as planning, construction, evaluation and validation. In present investigation fifty items/statements were prepared by the researcher which was reviewed by experts in the field and then first draft of the life satisfaction scale was ready for tryout. For pilot testing, the test was administered on representative sample of 50 college of teacher educators of different institutions keeping in mind that they should have knowledge of life satisfaction content and they must have gone through the content earlier. Achievement test having 50 items with three alternative choices each was given to participants and scoring was done with the help of scoring key. Difficulty Value and Discrimination Power of the test calculated. This test has a value **0.936** (Cronbach Alpha) for test consistency. Researcher also used different method to establish the reliability of the test*

Key terms:- Validity, Reliability, Difficulty index, tryout etc.



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Introduction:

Looking at the data needed for the present research work, investigator decided to construct a new and unique tool namely, Life satisfaction scale to measure level of Teachers/College of teacher Educator/ any professional personnel. Due to unavailability of suitable tools to measure the level of life satisfaction of teachers. Therefore the investigator decided to construct and standardized a tool for measuring life satisfaction of teachers in working in different stages of teaching field. For the quantitative research work as an output, investigator understands the importance of procedure of construction and standardization of life satisfaction scale.

For every investigator tool plays vital role in lighting the solution of the problem of research work. It is indirectly a backbone of the whole research work. In the present research work investigator decided to assess the levels of life satisfactions of the teachers, for which the life satisfaction scale was required.

It was found that there are no suitable scales to measure the levels of life satisfaction of teacher educators. As per the scale on life satisfaction is concerned, Q. G. Alam & Ramji Srivastav , Dr. (Mrs) Promila Singh(Raipur) & George Joseph (Bhilai) and Satisfaction with life scale (SWLS) by Diener, Emmons, Laren & Griffin (1985) were available but these tools developed on different aspects of life satisfaction for different workers/employees/teachers. If available there is very little number but they not suitable to the present conditions.

So, investigator decided to construct a scale and to standardize it. Without such standardized scale, necessary data for the problem cannot be collected. Following are the reasons, to construct and standardize life satisfaction scale. Hence, for constructing an rating scale for life satisfaction, investigator decided to go for Likert's summated ratings method. Investigator put the following steps into practice.

- Reading reference material for collecting and forming statements related to Life satisfaction.
- Collection and compiling of large number of statements depicting to measure the levels of life satisfaction of college of teacher educators. The instigator referred some theoretical background on life satisfaction.
- Construction of statements by investigator, depicting levels of life satisfaction of college of teacher educators.

- Final selection of statements in order to have proper representation of each dimension/component of life satisfaction was judged.
- Expert's opinion on few different questions/statements of life satisfaction was selection or rejection of the statements for final statements to be administered and analyzed.
- Administration of selected 100 statements, on small sample and scoring them with three point scales.
- Calculation of t' -value for each statement and to select statements on the basis of t' -value.
- Determining the reliability and validity of the scale for standardization and to construct a standardized tool on life satisfaction scale for college of teacher educators.

Preliminary rough draft copy of life satisfaction scale

For this purpose the investigator studied literature both based on theoretical and conceptual on life satisfaction and discussed with group of friends in the field of education that how the different component/dimensions of life satisfaction among the college of teacher educators. There were many clues and points collected by the investigator on which component/dimensions of life may be directly or indirectly impact on life satisfaction. Some statements were collected from the persons related to life satisfaction. The collected items/statements were linguistically compiled, some items/statements were collected from the experts working in the field of education, and some items/statements were constructed by investigator himself, reflecting on the different factors/components of life which affects on life satisfaction among college of teacher educators. Proper care was taken to include various factors/components which have direct consequences on life satisfaction. Altogether **nine** different components were selected to construct items/statements reflecting on the life satisfaction of college of teacher educators. In the selection of items/statements, positive and negative items/statements were approximately less or equal in number. It is to state that out of constructed 96 items/statements, for preliminary draft copy of life satisfaction scale. Out of the 96 statements for life satisfaction scale, 49 statements reflecting positive aspect and 47 statements reflecting negative aspects of life satisfaction among college of teacher educators.

In the final selection of the items/statements, investigator has taken care of appropriateness of the items/statements, as per the guidelines. Investigator read from various books for the criteria of selection of items/statements. Some experts in the field of Education were also consulted in this regard. There is an informal criterion for the selection of the items/ statements for life satisfaction scale.

The following points were kept in mind for the selection of the items/statements in the life satisfaction scale

- Avoid factual items.
- Avoid the items related to past, rather than present.
- Avoid the items giving more than one meaning.
- Avoid the items which are not related to the psychological object, considered.
- Express only one idea in one item.
- Statements should be precise, which do not exceed 25 words.
- Items using universality like all, always, none, never shows ambiguity, hence they should be avoided.
- Use simple, clear and comprehensive language.
- Words like only, just, merely should be used carefully and that too in moderation.
- Avoid the words which could not be understood by the examinee.
- Avoid double negative items.

The content/items covered in preliminary draft copy of Life satisfaction scale

Sr. No	Dimension/areas	Number of positive items	Number of negative items	Total
1	profession	9	7	16
2	Role	9	8	17
3	health	3	8	11
4	Locus of control	8	10	18
5	Personal	6	9	15
6	Socio-economic conditions	6	2	8
7	Martial	8	3	11
Total		49	47	96

In this way, the investigator prepared preliminary draft copy of Life satisfaction scale for college of teacher educators having total number of statements 96, with 49 positive items and 47 negative items.

Construction of the Scale for First run

After the selection of 96 items for the life satisfaction scale, it was essential for the investigator to scrutinize them to select the most effective items and to reduce the number of items to avoid boredom for respondent.

For this, investigator decided to take wide opinions of the learned educationist, researchers and psychologists. As per the directions and suggestion were made by experts. It had boosted the confidence of the investigator, Most of the experts consulted, were positive in cooperating for such effective research tool formation process. Thereafter, investigator prepared a table with all 96 items to take the opinions of the experts on the following basis of the questions in context with all the items. These questions, for which the experts were asked to give their clear opinions, were as under.

- Are the items proper, as per the classification of components?
- Are the items proper, as per the classification of positive or negative items?
- Is it appropriate to select these items for the first form of attitude scale?
- Is the selection of words in the items, suitable or not?
- Is the sentence formation appropriate or not?

When the investigator received, feedback from the experts regarding the preliminary draft copy of life satisfaction scale .it became very clear that which of the items were suitable to be included to the first form of the life satisfaction scale. Almost all the experts, except a few, gave their broader opinions for the selection and rejection or reconstruction of the items with few corrections. Most of the experts were given their opinion that to keep appropriate number of items in scale to avoid boredom for the respondents. All the reasons given by various experts for the selection or rejection of the items were read carefully by the investigator. Looking at the suggestions of the experts, it was decided to discard **12** items in the life satisfaction scale.

In constructing the life satisfaction scale, the investigator has consciously taken care of selecting items, according to the components as explained earlier. Investigator has also paid proper attention to balance the positive and negative items in the construction of life satisfaction scale. Component wise positive and negative statements, selected for the first pilot tryout form are shown in the following **Table** is given below.

The content/items covered after the feedback given by the experts in preliminary first draft copy of Life satisfaction scale

Sr. No	Dimension/areas	Number of positive items	Number of negative items	Total
1	A: profession	8	6	14
2	B: Role taking	8	6	15
3	C: Health	3	7	10
4	D: Locus of control	7	7	14
5	E: Personal	6	7	13
6	F:Socio-economic conditions	6	2	8
7	G: Family and Martial	6	4	9
Total		44	39	83

It is seen from Table: 4.3 that, more Items were selected from component - B: role taking aspects affects more on the life satisfaction of teacher educators. A: professional aspects and D: locus of control Aspects items were selected more, C: Health aspects 10 items, E: personal aspects 13 items, G: Family and Marital status aspects 9 items and F: Socio-economic conditions aspects 8 items were selected for first try out purpose.

Pilot Tryout of the Life satisfaction scale:

According to the procedure discussed in previous sections, the life satisfaction scale was constructed. It was printed in pages in which the details required to be collected from the respondents in respect of the study on the front page along with the instructions to the respondent. On the second section the life satisfaction covering **83** items selected in the procedure of construction of first-form were printed and in front of each items it was asked to the respondent to give appropriate tick mark (\surd) on any one of the three points namely, (1) Agree (A) (2) Undecided (U) and (3) Disagree (DA).It was decided to give full time to respondents to all items and respondents were instructed to raise their hands when they complete responding all the items. Within **90 to 100** minutes, respondents returned responded scale. Hence, the investigator inferred that per statement almost one minute is required.

This first form of life satisfaction scale was administered to 50 teacher educators', according to the strata given in the **Table: 4.4**, which is mentioned below.

Sr. No	Gender	Number of Respondents
1	Male	34
2	Female	16
Total		50

After completion, the life satisfaction scales were collected from all the respondents. All the respondents, at all the colleges were requested to respond for all the items of the life satisfaction scale. Most of the respondents, responded effectively, sincerely and transparently.

Scoring of the Attitude Scales:

After the collection of data for tryout form of life satisfaction scale, it was essential to score each item of the scale, responded by the respondents of small sample. This was logical and tedious task of assessing the responses of the respondents. As respondents had given their responses on each items on three point scale, i. e. (i) Agree(A) , (ii) Undecided(U) (iii) Disagree(DA)

“For scoring purposes the responses to negative items are weighted 1, 2, and 3, and the responses to positive items are weighted 3, 2, and 1. Respectively from A. to D.A.” Hence, investigator scored all the items of all the responded in the scale from 1 to 3 and 3 to 1 for negative and positive items respectively. There are **83** items in the life satisfaction scale, so maximum score a respondent can have is 216 and minimum score of this try out scale is 83.. Then, the total score was calculated by adding scores on positive and negative items on the response sheets of the scale. After it was administered for item analysis to know the difficulty levels and appropriate of items in the scale, the following is the procedure were followed for item analysis.

Item analysis:

The item analysis is an important statistical procedure, by means of which, the investigator differentiate good items from the poor ones. Every items of the scale should contribute something towards the measurement of life satisfaction.

Steps involved in item analysis:

- Arrange the response sheets from the highest score to lowest score.
- From the ordered set of response sheets, make two groups. Put those with the highest scores in one group (top 27%) and those with the lowest scores (lowest

27%) in the order group. The responses of the respondents in the middle 46% of the group are not included in the analysis.

- For each item (Agree, undecided and disagree) count the number of respondents in each group who answered the item according their choices
- Here, it is very clear that H, means out of 50 respondents 13(27%) of respondents in life satisfaction scale having the highest marks and L means respondents out of 50 respondents 14(less or equal to 27%) respondents in life satisfaction scale having the lowest marks. Remaining 33 (66%) of respondent's life satisfaction scale scores were kept separate as medium group.
- Next, item-wise big charts were prepared. One for higher group of respondents and the other for lower group of respondents. In the chart of Higher .group of respondents, on the horizontal side (x-axis) of the chart, item number from 1 to 83 were taken ,while respondents are on the vertical side (Y-axis) where respondent number form H-1 to H-13 were taken. Each respondent's score for each items of life satisfaction scale was mentioned in the respective box in the chart. In the same way, the same chart was prepared for L-1 to L-14 respondent of lower group. For finding out the *Difficulty index* value of each item by the following formula.
- **Difficulty index**= Sum (total scores of each item in high group + total scores of each item in low group/ Grade scale*(N₁+N₂)
- After calculating the difficulty index of each item in the scale it is subjected retain, reject or modify the items based on the difficulty index value.

Below 0.25:- item is very difficult

0.26 to 0.75:- Item is of average difficulty.

Above 0.76:- Item is easy.

The investigator for conveniently selected items is of average difficulty in final try out of the scale.

Sr. No of item	D.I value	Selected/ Rejected	Sr. No of item	D.I value	Selected / Rejected	Sr. No of item	D.I value	Selected/ Rejected
1	0.55	selected	29	0.79	selected	57	0.78	selected
2	0.66	selected	30	0.19	rejected	58	0.45	selected
3	0.56	selected	31	0.74	selected	59	0.19	rejected
4	0.78	selected	32	0.35	selected	60	0.23	rejected
5	0.78	selected	33	0.66	selected	61	0.21	rejected
6	0.45	selected	34	0.21	rejected	62	0.11	rejected
7	0.26	rejected	35	0.56	selected	63	0.67	selected
8	0.67	selected	36	0.24	rejected	64	0.65	selected
9	0.65	selected	37	0.78	selected	65	0.19	rejected
10	0.89	rejected	38	0.78	selected	66	0.23	rejected
11	0.54	selected	39	0.45	selected	67	0.21	rejected
12	0.78	selected	40	0.67	selected	68	0.54	selected
13	0.76	selected	41	0.23	rejected	69	0.78	selected
14	0.35	selected	42	0.21	rejected	70	0.19	rejected
15	0.90	rejected	43	0.65	selected	71	0.97	rejected
16	0.66	selected	44	0.13	rejected	72	0.19	rejected
17	0.56	selected	45	0.54	selected	73	0.76	selected
18	0.78	selected	46	0.78	selected	74	0.23	rejected
19	0.78	selected	47	0.35	selected	75	0.65	selected
20	0.45	selected	48	0.86	rejected	76	0.66	selected
21	0.67	selected	49	0.81	rejected	77	0.56	selected
22	0.14	rejected	50	0.66	selected	78	0.19	rejected
23	0.65	selected	51	0.23	rejected	79	0.23	rejected
24	0.54	selected	52	0.21	rejected	80	0.21	rejected
25	0.27	rejected	53	0.11	rejected	81	0.78	selected
26	0.78	selected	54	0.56	selected	82	0.78	selected
27	0.76	selected	55	0.78	selected	83	0.89	rejected
28	0.93	rejected	56	0.96	rejected	84		

Calculated 'difficulty index value and decision regarding selection or rejection of the item in the life satisfaction scale

Final Form of the life satisfaction scale

At the end of calculation of difficulty index value, 50 items were retained in the final draft of life satisfaction scale. Now, the life satisfaction Scale for college of teacher educators was in its final form. In the final form of this scale, there were two sections. On the first section the preliminary information of the respondent was asked to be filled up.

With above information, the request to the respondents was also printed explaining that, administering this life satisfaction scale was not their examination but a kind of research work for Ph.D. level. They were requested to give their responses on the basis of their personal concepts and co-operate for this research work. Below this, names of the investigator and his guide were printed. Now, in the same section, five instructions to the respondents to respond this life satisfaction scale were printed.

Pilot Tryout of the Life satisfaction scale

According to the procedure discussed in previous sections, the life satisfaction scale for teacher educators. It was printed in which the details required to be collected from the respondents in respect of the objectives printed on the front page along with the instructions to the respondent. On the second, section of this scale, 50 items selected in the procedure of construction of first-form were printed and in front of each item, it was asked to the respondent to give appropriate tick mark(√) on any one of the three points namely, (1) (A) ,(2) Undecided (U) and Disagree (DA). It was decided to give full time to respondents to all items and students were instructed to raise their hands when they complete responding all the statements. Within the time.

Table: 4.4: Sample For Testing First-Form Of The Life Satisfaction Scale In Context With Two Main Strata Gender And Locality

Sr. No	Gender	Locality	N
1	Male	Rural	15
2	Female	Urban	15
Total			30

In administering the life satisfaction scale for testing first form of the life satisfaction scale for teacher educators proper care was take to select representative sample scale was conducted. Few randomly selected college of teacher educators of GUK, were asked to respond, where they were explained in brief regarding research work and its purpose by the investigator They were instructed to raise their hands after the completion of the items. After completion, the life satisfaction scales were collected from all the respondents.

Reliability and Methods of Determining Reliability of Life satisfaction scale

There are different methods of establishing the reliability; the investigator selected the most appropriate and practically useful methods, for determining the reliability of the

present test. The investigator calculated the reliability of the present test with the following methods.

Test-retest method: Using a method the co-efficient of co-relation r was calculated by, Pearson's product moment method.

Firstly, the co-efficient of co-relation for test-retest method was calculated by Pearson's product moment method by Pearson's method for ungrouped data was calculated by using the following formula.

The formula for calculating co-efficient of co-relation is,

$$r = \frac{N * \Sigma XY - \Sigma X * \Sigma Y}{\sqrt{N * \Sigma X^2 - (\Sigma X)^2} \times \sqrt{N * \Sigma Y^2 - (\Sigma Y)^2}}$$

The scores on attitude scale for test and retest, for the 30 teacher educators of different randomly selected college of Education as shown in the above table.

Calculation of reliability of attitude towards life satisfaction scale by Pearson's method for ungrouped data with test-retest method according to the following table: 4.8 is given below

Here , $\Sigma X=2814$, $\Sigma Y=2898$, $\Sigma X^2=272480$, $\Sigma Y^2= 287576$, $\Sigma XY=279530$, $N=30$

After calculating the co-efficient of correlation by using the above formula was to be found $r=0.76$

Validity and Methods of Determining Validity

In the procedure of standardization of any test, validity of the test is one of the vital important dimensions to decide about the effectiveness or usefulness of the test. Generally, reliability and validity are closely connected to each other. In other words, the validity of a test concludes, what the test measures? In addition, how well does it measure? There are many different methods to determine validity of a test. Investigator has gone through content validity.

Content Validity : This is a type of validity which involves essentially the systematic examination of test, conducted to determine whether the representative sample of the behavior domain required to measure are covered or not ? i.e. validation procedure of evaluating any achievement test in context with representative behavioral domain In the very beginning of construction of the primary form of present life satisfaction scale, the

investigator studied some related references and also discussed with some eminent experts in educational research.

In the whole procedure/ of preparing the final form of the life satisfaction scale, out of 83 items of the primary form, 50 items were selected for the final life satisfaction scale keeping proper attention on content validation of each statement. In the Post-Test procedure of calculation of score, it is found that the statements selected were satisfactory to the tune of measuring the requisite objectives from the test. Thus, it can be said that the present attitude scale is undoubtedly valid as far as the content used in the formation of the item is concerned.

Conclusion:

This study was done to construct and standardized an life satisfaction scale for college of teacher educators to find out their attitude towards life satisfaction. This scale has been found to be very reliable and valid in terms of face and content validity. Moreover norms have not been established fixed which flexible according to user researcher, which serves as frame of reference for interpreting the obtained scores. Therefore this scale is reliable and valid and can be used by Teacher Training Institutes, Teacher Educators or individuals who are interested in finding out the attitude of teachers towards life satisfaction.

References:

- Ann, P.S. 2004. *Measurement, Assessment and Evaluation*. Lagos: Concepts Publications Ltd.
- Anthony, J. and Susan, M. 2005. *Education Assessment of Students*. New Jersey: Person Education Ltd.
- . Baer, W.C. 1997. *General Plan Evaluation Criteria: An approach to making better plans*. *Journal of the American Planning Association*, 63(3): 329-344.
- Best, J.W. 1982. *Research in Education, 4th Edition*, Prentice Hall of India Pvt. Ltd., New Delhi.
- Garrett, H.E. and Woodworth, S.R. 1966. *Statistics in Psychology and Education*. David McKay Company. Inc, New York.
- Koul, L. 2009. *Methodology of Educational Research*. Vikas Publishing House Pvt. Ltd., India.
- NCERT. 2005. *National Curriculum framework-2005*. Publishing department, New Delhi: NCERT.
- Rainer, Julie, D. 2002. *Reframing Teacher Education- Dimensions of Constructivist Approach*. Kendall/Hunt Publishing Company, United States of America.