CHAPTER IV

CONSTRUCTION OF A QUESTIONNAIRE AS AN INSTRUMENT OF ENQUIRY
A questionnaire is a systematized list of questions developed for an investigation of a problem. It is a set of questions designed for eliciting spontaneous responses of the subjects.

A questionnaire is a technique to seek personal experience, opinion, attitude, interest, belief, motive, etc. of the respondent. The replies of the subjects to the questionnaire are tabulated methodically and treated statistically to reach a scientific decision.

In the preliminary administration (or the experimental tryout) a questionnaire with 56 items in both Assamese and English languages was prepared in consultation with 10 experts in the line. There are 3 kinds of responses such as “Yes”, “Do not know”, and “No” written against each of the 56 items. The “Yes” response indicates agreeableness to the item, the “Do not know” response indicates indifference to the item and the “No” response indicates the disagreeableness to the item.

Pilot Study:

The pilot study is useful to reveal the weaknesses of the questionnaire in giving the instructions to the subjects and a desirable length of the questionnaire. Of course Conrad (1948) recommended
three preliminary test administrations. The first one, for which a sample of 100 subjects will suffice, is for the purpose of uncovering the gross defects.

A test or a questionnaire can be improved through the selection, substitution or revision of items. Item analysis makes it possible to shorten a test, and at the same time increases its validity and reliability. Other things being equal, a longer test is more valid and reliable than a shorter one (Anastasi, 1967).

Only one hundred couples were selected by systematic sampling with random start and instructed to respond to each of the 56 items of the questionnaire by giving a ‘tick’ mark on only one of the three responses i.e. “Yes”, “Do not know” and “No” as stated against each of the items of the questionnaire. There is neither time limit nor age limit. The couples of the group were taken as the subjects of the preliminary investigation. About half-an-hour was necessary usually to respond all the items of the questionnaire. The scores of 0, 1 and 2 were allotted mostly for scoring the responses “No”, “Do not know” and “Yes” responses respectively in an arbitrary fashion.
The questionnaire was constructed as an instrument of enquiry by studying the statistical techniques such as –

a) Item analysis,

b) Reliability of the scores and

c) Validity of the scores obtained by the respondents of the questionnaire.

(a) Item analysis:

The most common use of the item analysis data is the selection of best items to compose the final test form (Guilford, 1954). Item analysis is a scientific procedure which measures the indices for the truthfulness (or validity) of items. The valid items are selected and the invalid items are rejected through the process of item analysis. Practically the validity of the questionnaire is dependent on the validity of the items of the questionnaire (Singh, 1986).

Item analysis involves three main topics (i) item selection, (ii) item difficulty and (iii) item validity.

(i) Item selection: Item selection is meant for finding out proper items carefully from different sources of informations. It requires, consensus of experts in selecting suitable items for the questionnaire.
(ii) **Item difficulty**: This questionnaire is meant for couples in respect of their marital adjustment with special reference to personality. Practically it does not require to study the item difficulty.

(iii) **Item validity**: The method of validating a test item is to determine whether the item discriminates between subjects differing sharply in the function being measured. The criterion of internal consistency admits into the final questionnaire only those items which have been found to separate high-scoring and low-scoring members of the sample (Garrett, 1953).

According to Guilford (1954) a very common step is to divide the total sample into two halves on the basis of criterion. The question naturally arises as to how far the 2 halves which may be referred to as the upper and the lower halves behave differently with respect to the particular item. The simplest index which may be used is the difference $Pu - Pl$, where $Pu$ and $Pl$ are proportions of respondents passing the items (or responding “Yes”) in the upper and lower halves respectively. Guilford (1941) has shown that when we know the proportions who pass the item in equal upper and lower criterion groups the formula for Chi square reduces to -
where $p$ may be treated as the mean of $p_{u}$ and $p_{l}$, $q = 1 - p$. and

$N$ = Number of cases.

The total scores obtained by each of the 100 couples were calculated for further investigation. The median of the total scores obtained by 100 couples with total scores higher than the median formed the “Upper Half” and the remaining 50 couples with total scores lower than the median formed the “Lower Half”. The total number of “Yes” responses to each of the 56 items was counted separately for 50 couples in the “Upper Half” and that for 50 couples in the “Lower Half”. These counts were used for calculation of Chi-square for each of the 56 items for the questionnaire.

By applying the formula of Chi square i.e.,

$$
\chi^2 = \frac{N(p_{u}-p_{l})^2}{4pq}
$$

only 8 items of the questionnaire have been found insignificant. So these 8 items have been excluded from the questionnaire. So the final questionnaire includes only 48 items.

(b) Reliability of the scores:
In psychological measurement reliability indicates consistency, dependability and stability of the test or the questionnaire. So reliability measure the extent to which the measurement device or the questionnaire yields the approximately the similar results under similar environment and conditions.

A test score is reliable when it is sable and trustworthy. Stability and trustworthiness depend on the degree to which the score is an index of true ability and is also free error.

There are four methods of determining the reliability coefficient of a test or questionnaire. They are as follows –

A) Split-half method,
B) Test-retest method,
C) Parallel forms method and
D) Method of Rational equivalence.

The split-half method is considered by many as the best of the methods for determining the reliability of scores of a test or a questionnaire.

Here the split-half method is selected for measuring the reliability of the scores of the questionnaire. In the split-half method, the
questionnaire is divided into two equivalent halves by odd-numbered items and even-numbered items and the coefficient of correlation by Product Moment Method (Pearson's "r") has been calculated for the half-test, the self-correlation of the whole test is estimated by the Spearman-Brown prophecy formula (Garrett, 1953).

\[ r_{II} = \frac{2r_{1/2} \frac{1}{1 + r_{1/2} \frac{1}{2}}} \]

where \( r_{II} \) = reliability coefficient of the whole test and

\[ r_{1/2} \frac{1}{2} = \text{reliability coefficient of the half-test.} \]

Here the reliability coefficient of the half test is found to be 0.8. So the reliability of the whole test (i.e. Questionnaire) is calculated below:

\[ r_{II} = \frac{2r_{1/2} \frac{1}{2}}{1 + r_{1/2} \frac{1}{2}} = \frac{2 \times 0.8}{1 + 0.8} = \frac{1.6}{1.8} = 0.88. \]

One of the main advantages is that all data for the calculation of reliability of the scores are obtained in a single occasion. As a result the variations brought out by differences between the different situations are avoided easily.
(c) Validity of the scores:

If a clock indicates time regularly and correctly, it will be treated as a valid instrument for measuring time. But if it runs irregularly and incorrectly then it is not considered as a valid instrument for measuring time. So validity means in ordinary sense relevance. It has a predictive value as well as a discriminative value. According to Rajamanickam (2001) validity of a test measures what we wanted to measure. It is to see whether the actually measures what we intent to measure.

According to Freeman (1962) an index of validity shows the degree to which a test measures what it purports to measure, when compared with accepted criteria.

According to Guilford (1954) index of reliability can be treated as intrinsic validity which is measured by the square root of the proportion of true variance to total variance, in other words, the square root of its reliability.

The symbol \( r_u \) represents the proportion of variance in the obtained scores determined by variance in the true scores places \( r_u \) in the category of coefficient of determination, which is a coefficient of correlation squared. The coefficient of correlation that has been squared
in this case is $r_{tx}$ the correction between obtained and true scores. This statistic is known as the intrinsic validity (i.e. index of reliability).

In symbol, $r_{tt} = r_{tx}^2$

$$r_{tx} = \sqrt{r_{tt}}$$

The value of $r_{tt} = .88$ as calculated in the previous page in terms of reliability of the whole test.

So the intrinsic validity in symbol $r_{tx} = \sqrt{r_{tt}} = \sqrt{.88} = .94$

Now the questionnaire can be treated as reliable and valid instrument for scientific investigation.

**FINAL STUDY**

In the final study 500 couples were selected by the systematic sampling with random start. The three different tests were administered by the investigator on these couples of different districts of Assam state of India. The age of the couples vary from 25 to 35 years and the period of their marital life ranged from 3 to 15 years. The sample includes different castes, religions, socio-economic backgrounds, etc.

The data collected from 500 couples as the sample for final study were tabulated scientifically and treated statistically with the help of a
modern high speed computer system in order to arrive at a wise decision and o draw a meaningful conclusion.

The different dimensions which were related to the self-devised questionnaire were as follows –

(1) Family Background,
(2) Educational Qualification,
(3) Economic Condition,
(4) Personality Make-up and
(5) Inter Personal Relationship.

(1) **Family Background** :

Marital adjustment depends on family background. Parental family disruptions affect marital stability and also influence the children and affect their marital life. The family lays the foundation stone of values, belief and it is the basic element of the society and community.

As said by George Moore (1985) “A man travels the world over in search of what he needs, and returns home to find it.”

It is very important how one is brought up. Parent’s influence their children’s behavior in atleast three ways

(i) Through their own behavior they present situation that elicit certain behavior in children.
(ii) They serve as role models.

(iii) The selectively reward behavior (Pervin, 1980).

The way the parents treat their children had a profound impact not only on family relations, but also on their attitude values intra-psychic behavior.

The children learn from parents how to love and to be loved, how to tolerate frustration and how to face reality.

Parents who have a high marital satisfaction expected that their children too have a well adjusted marriage.

(2) Educational Qualification:

Education leads to better marriage. Individual generally prefers to marry with equally qualified person. Women with changing economic role as dual earner have also increased the importance of education in marriage to support family. As Renu Kumari (1999) stated that it has been seen if the husband’s education is lower than that of his wife, the husband develops an ego problem which results the development of conflict. It is not only the education of the partners that matter even parents’ education is important. If the parents are educated and enlightened on both sides, adjustment on the part of the children will be much easier than those children whose both the parents are not so educated and enlightened.
(3) **Economic Condition**:

Marriage provides economic support to an individual. The spouses who work together can support the family desirably to fulfill the basic needs as well as their requirements and emergencies. Traditionally, only the husband used to earn and support the family. In the modern age both the husband and the wife like to work together for satisfying their dominant materialistic and social needs. As state by Rosenbratl and Chandas (1983) couples facing economic problems are vulnerable to stress leading to marital conflict.

Men who are unlikely to be a good provider are not seen as good marriage partner. Moreover, women who are earning are less interested in marriage. People generally select the partner from the same economic background, so that they have no problem in marital adjustment. If the economic status does not match, here may be marital conflict and dissatisfaction.

It is to be remembered that money can't give happiness. Unfortunately many marriages may be unsuccessful probably due to financial problem.

Though economic matter is important, but more important is one's attitude to adjust with the marital partner. In this context Burgess
and Locke (1950) reported that income, as such is not significant for adjustment in marriage.

(4) Personality Make-up:
Personality traits denote a person’s temperament, needs, expectations, tastes, attitudes, values of life, individual capacities and capabilities as manifested in him or her. Marital adjustment is greatly influenced by personality of the spouses. Many researchers have been conducted in this direction to name a few [Richard and Lewak (1990), Zbignew (1981), Sharpley and Janet (1982), Benjamin (1980)]. Sometimes marital maladjustments occur mainly on account of clash of values of life and difference in personality patterns of the spouses. To have a healthy marital life, compatibility of personality traits of both the husband and the wife is a must.

(5) Interpersonal Relationship:
Interpersonal relationship plays an important role in marital adjustment. Lack of communication is considered as the main aspect of unsuccessful marriage. According to James Hawkins, (1968) expressing affection, positive emotion, tender endearment and participating in recreational activities are missing in married life in modern age. As a result emotional distance is being created among the couples.
An interpersonal relationship is related to close association between the husband and the wife. People in a relationship tend to influence each other, share their thoughts and feelings, and engage in activities together. Because of his interdependence, anything that changes one member will also affect the other member.

According to Berscheid and Peplau (1983) interpersonal relationship is based on care, love, liking, and regular interactions. Any marriage which lacks in this aspect may have a maladjusted marriage.

All these aspects were statistically analysed and their influences on marital adjustment were assessed also.