CHAPTER III
Chapter III

Methods and procedures

3.1 Design of the study:

The present study entitled; "Religiosity, Locus of control and mental health of university students in Iran" can be described as an exploratory descriptive survey. It is exploration in the sense that it sets out to find the relationship between Religiosity, locus of control and mental health of university students which is an unexplored area. "A descriptive study is concerned with functional relationships that exist, opinions that are held, processes that are going on, effects that are evident or trends that are developing" (Best 1983).

The survey method gathers data from a relatively large number of cases at a particular time. It is concerned with the generalized statistics that result when data is abstracted from a number of individual cases. The survey method of research involves a clearly defined problem and definite objectives.

3.2 Sample:

For the purpose of conducting the study 400 bachelor class students were selected by cluster method of sampling with respect to subject (art, science), gender (male, female), marital status (married, unmarried), geographical locale (urban, rural), occupation status (employed, unemployed), faculty type (Arts, science, agriculture engineering), average of diploma, average of university, academic groups (freshman, junior, senior), Urban residence
(years of staying in urban), age groups and internally/externally controlled student from Urmia university of Iran.
### Table 3.1
Variables and their classification

<table>
<thead>
<tr>
<th>S.NO.</th>
<th>Variable</th>
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<tbody>
<tr>
<td>1</td>
<td>Religiosity</td>
<td>Total</td>
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</tr>
<tr>
<td>2</td>
<td>Locus of con.</td>
<td>Total</td>
<td>400</td>
</tr>
<tr>
<td>3</td>
<td>Mental health</td>
<td>Total</td>
<td>400</td>
</tr>
<tr>
<td>4</td>
<td>Subject</td>
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<tr>
<td></td>
<td></td>
<td>Science</td>
<td>255</td>
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<td>Gender</td>
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<td></td>
<td></td>
<td>Female</td>
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<td>6</td>
<td>Marital status</td>
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<tr>
<td></td>
<td></td>
<td>Unmarried</td>
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<td>7</td>
<td>Geographical status</td>
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<td></td>
<td></td>
<td>Rural</td>
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<td>8</td>
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<td>9</td>
<td>Faculty type</td>
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<td></td>
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<td></td>
<td>Agriculture</td>
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<td>Engineering</td>
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<tr>
<td>10</td>
<td>Average of diploma</td>
<td>Up group</td>
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<tr>
<td></td>
<td></td>
<td>Middle group</td>
<td>209</td>
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<tr>
<td></td>
<td></td>
<td>Bottom group</td>
<td>179</td>
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<tr>
<td>11</td>
<td>Average of university</td>
<td>Up group</td>
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<td></td>
<td></td>
<td>Middle group</td>
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<tr>
<td></td>
<td></td>
<td>Bottom group</td>
<td>23</td>
</tr>
<tr>
<td>12</td>
<td>Academic groups</td>
<td>Freshman</td>
<td>98</td>
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<td></td>
<td></td>
<td>Junior</td>
<td>151</td>
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<td></td>
<td></td>
<td>Senior</td>
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<td>13</td>
<td>Urban residence</td>
<td>1 group</td>
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<td>4 group</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Age group</td>
<td>1 group</td>
<td>182</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 group</td>
<td>215</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 group</td>
<td>3</td>
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<td>Internally/Externally controlled</td>
<td>Low group</td>
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<td></td>
<td></td>
<td>108</td>
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</tbody>
</table>
3.3 Tools employed:

The following tools are used for collecting the data.
1. Religiosity questionnaire (Gupta 1980)
2. Locus of control scale (Rotter 1966)
3. Teacher mental health scale (Kamau and Gupta 1992)
   was adapted and used by the investigator.

3.3.1 Religiosity questionnaire (Gupta, 1980):

For the purpose of determining the religiosity of the Urmia university students, a locally constructed and standardized questionnaire by Gupta (1980) was used. The questionnaire contained 50 items on the following four dimensions.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Dimensions</th>
<th>No of the items</th>
<th>Sequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Faith in God</td>
<td>18</td>
<td>1-18</td>
</tr>
<tr>
<td>2</td>
<td>Faith in Hell/Heaven</td>
<td>11</td>
<td>19-29</td>
</tr>
<tr>
<td>3</td>
<td>Faith in Religion</td>
<td>11</td>
<td>30-40</td>
</tr>
<tr>
<td>4</td>
<td>Faith in Rituals</td>
<td>10</td>
<td>40-50</td>
</tr>
</tbody>
</table>

In the questionnaire, there are both positive and negative items. The response to each item was recorded under three columns i.e. Agree, Doubtful and disagree. The scoring procedure adopted was to score separately the negative and
positive dimension of the items. The positive items were given weight age of 2, 1, 0 to agree, Doubtful and disagree respectively. The negative items were given a reverse score of 0, 1, 2 for agree, doubtful and disagree categories.

In the questionnaire the negative items are serial number: 10-19-21-31-32-34-36-37-40-44-45-47-49 and the rest of the items are positive. The total religiosity scores were calculated by summing up the scores of all the items. For the purpose of adopting the questionnaire to Iranian Muslim students changed some words in some items as follows: the word Mosque instead of Temple in these numbers: 41-42-44 and Islam instead of Buddhism and Mohammad instead of Buddha in 48, 49 numbers.

3.3.1.1 Reliability and validity of the test:

The reliability of the test was estimated with the help of test-retest method, which was found to be 6.5 significant at .01 level. Split-half reliability estimated with the help of spearman-Brown formula was found to be .84. The validity of the test was also established. Convergent validity was estimated against the external criteria, which was .44 significant at .05 level.

The results of the reliability and validity of the test of religiosity are sound enough to accept this test a reliable and valid measure for the purpose of present investigation.
3.3.2 Locus of control Scale (Rotter, 1966):

The locus of control scale was originally conceived as a unidimensional measure of internal versus external control of reinforcement (Rotter 1966). In his introduction of the scale, Rotter, reports two-factor analysis of the scale, which yielded a strong general factor.

Rotter conducted one study of 400 college students. This study yields a general factor, which accounted for much of variance and several small factors. Rotter also reported a factor analysis done by Franklin (1963) in which there was a total variance. Both studies were cited as evidence for the unidimensionality of the scale. A re-analysis of Franklin's data by Prociuk (1977) indicated that Franklin's general factor accounted for only 6.4% of the total variance and few of the 23 items of the scale had loadings on .35 of greater on the factor. Prociuk concluded that Franklin's factor accounted for 53% of the common variance.

A number of factor analysis of the items on Rotter I.E. scale have been conducted since 1966 and all have supported the notion of the multidimensionality of the scale based on finding two or more factors. Watson (1981) summarized 16 factors analytic studies of the I.E. scale in which 18.8% to 44.5% of the variance was accounted for by two to five factors. In addition to reviewing other studies Watson (1981) analyzed the I.E. scale, using three methods of factor exudation, she concluded that the two factor solution was adequate and probably the best representation of the scale.

Mcnish and Srivastand (1982) made the most serious attempt to determine the actual number of factors in the I.E. scale they were concerned with total variance,
using principal components analysis followed by varimax rotations. They found that both the screen test and the minimum eigen value 1.00 indicated a mine-factor solution.

In a more recent article, Barley and Viesle (1987) studied the number of makeup of the factors of Rotter's I.E. scale with a sample of college students and reported that there were 10 components with eigen value greater than 1.00 and the screen test also indicated that there were 10 factors. This finding supports the statement of Rotter (1975) that "factor analysis of the I.E. scale with different subjects and situations, does not reveal the true structure of the construct, they only reveal the kinds of similarities perceived by a particular group of subjects". Like most other factor analysis of the I.E. scale these results support the nation that is multidimensional.

The locus of control has been operationalized many times in terms of causal attribution psychological and personality dimensions. Ganellen and Blaney (1985) stressed the need for assessment of the different dimensions of locus of control rather than treating it as a unidimensional construct.


The Rotter I.E. scale (1966) has been the most widely used measure of internality versus externality.
Rotter (1975) says that to view the question as unidimensional versus multidimensional is appropriate. He claims that a broad concept of internal versus external locus of control is appropriate for most samples and that those are appropriate for most samples and are likely to be different subscales within the concept that will vary from sample to sample.

The Rotter I.E. locus of control scale, which has a unidimensional and multidimensional components, was adopted for the present investigation. This scale measures internal external dimension of personality that is internal and external control of the person.

It is a 29-item scale with 6 filler items. Items are scored towards externality, so that a higher score on the scale indicates a more external direction and a lower score on the scale indicates a more internal direction.

Each item has two statements one representing the internal direction and the other representing the external direction. The subject is required to check one of the two statements according to his own belief. One mark is given for each of the keyed choice. There is no time limit.

3.3.2.1 Scoring of the scale

Scores range from 0-1 for each item. The filler items 1, 8, 14, 19, 24 and 27 are not scored. The possible range of scores in the scale is 0-23.
3.3.2.2  Responses on items at serial numbers:

2(a), 3(b), 5(b), 6(b), 7(a), 9(a), 10(b), 11(b), 12(b),
13(b), 15(b), 16(b), 17(a), 18(a), 20(a), 21(a), 22(b),
23(a), 25(a), 26(b), 28(b), 29(a) are directed towards
externality and carry a score of one point each.

2(b), 3(a), 4(a), 5(a), 6(a), 7(b), 10(a), 11(a),
12(a), 13(a), 15(a), 16(a), 17(b), 18(b), 20(b), 21(b),
22(a), 23(b), 25(b), 26(a), 28(a), 29(b) are directed
towards internality and carry a score of zero each.

Total score obtained by an individual on 23 significant
items in this scale represents his locus of control
orientation.

Reliability:

The reliability and validity of the internal - external
scale is well established. The reliabilities as estimated by
three methods, Kuder -Richardson, split-half and the test
retest method were respectively found to be. 69 to. 73, 65to
.79 and 55 to .83 in different samples (Hasan, 1974).

Concerning the overall validity of the internal -
external scale, Rotter (1966) states, a series of studies
provide strong support for the hypothesis that the
individual who has strong belief he can control his own
destiny is likely to:

a) Be more alert to those aspects of the environment,
which provide useful information for his future behavior.
b) Place greater value on skill or achievement,
reinforcement and to be generally more concerned with his
ability, particularly his failures.
C) Be resistive to subtle attempt to influence him.
The internal consistencies and test-retest reliabilities of the Rotter internal - external scale have been found to be 'good' by Rotter (1966) also correlations with desirability are moderate and extensive both in laboratory and field situation (Rotter, 1975, lefcount, 1976, Strickland, 1977).

3.3.3 Teachers Mental health Scale (TMHS) (Kamau, 1992):

According to definition of mental health in this research work, investigator has adapted the teacher mental health scale for students and results are successfull. It has five dimensions:
1. Personal well - being
2. Anxiety factor.
3. Disabling symptoms
5. Capacity to cope with ordinary demands and stress of life.

3.3.3.1 RELIABILITY:

The correlation between the two administrations of the TMHS was found to be 0.83. This coefficient was found to be significant at 0.01 level of confidence. It can be said that the scale has a highly positive and significant correlation and the TMHS can be considered as a reliable tool to be used for research purpose.
3.3.3.2 Validity:

TMHS's coefficients of correlation fall at 0.20 or more, indicating satisfaction with validation.

3.3.3.3 Administration:

The TMHS can be administered to an individual or to a group. The instructions printed on the cover page of the test booklet make the TMHS virtually self-administering. After the examiner has read the instructions the administrator should answer any question that may arise. The examiner should fill in necessary identification information. Reading the instruction with examiner and discussion of certain points in order to be sure the examiner understands what is required is permitted. The purpose for the test should not be disclosed to the examiners as this may lead to bias in answering the test. However, the examinees should be assured that all their responses would be treated as confidential. There is no set time for completion of the test. However average time for completion is 20-30 minutes. No compulsion should be put on the examinees about the finishing time but they should be encouraged to complete answering all the questions properly.

3.3.3.4 Item Distribution:

1. Personal well-being: Item No: 3, 9, 10, 11, 12, 16, 17, 33, 36, 39, 40, 41, 42, 43, 45, 46, 47, (Total 18).
2. Anxiety factor: Item No.: 6, 7, 24, 25, 32, 49, 50. (Total 7).
3. Disabling symptoms: Item No.: 4, 13, 14, 18, 20, 21, 28, 37, 44. (Total 9).

4. Capacity to establish constructive relationship: Item No. 1, 5, 8, 15, 27, 31, 34, 35. (Total 8).

5. Capacity to cope with ordinary demands and stress of life: Item No. 2, 19, 22, 23, 26, 29, 30, 48. (Total 8).

3.3.3.5 Scoring:

All correct responses carry the score of items: 1, 2, 3, 8, 13, 28, 29, 30, 31, 38, 45, carry a "yes" response. Items: 4, 5, 6, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 32, 33, 34, 35, 36, 37, 39, 40, 41, 42, 43, 44, 46, 47, 48, 49, 50 carry a "No" response.

For every correct response one mark is given and for every incorrect response zero mark is given. A high score indicated a high level of mental health and a low score indicated a low level of mental health. A high level of mental health indicates a positive direction and a low level of mental health indicates a negative direction. The respondents were required to respond to each item in terms of "Yes" or "No". For each correct response the score of one was given. A positive response can either be in the positive or negative response and vice versa for negative response.
3.3.4 Procedure for data collection:

Data collection was done in the Azerbaijan province in Urmia University; this province is one of the 28 provinces, which is located in north west of Iran. It is one of the important provinces politically and ethnically. Geopolitically it is meeting point of three countries viz Iraq, republic of Azerbaijan and Turkey. The society consists of Kurds, Turks and other Iranians. Religious denomination consist of Islam, Christianity and Jewish.

Urmia is the central city of the province and its university is one of the oldest universities in Iran and the highest one in this province. From all corners of the province the students come to this university.

The data was collected in the year 2000. Collection of data was completed in two stages in the first stage; Teacher mental health scale was adapted by changing some items that relate to teachers, and also religiosity questionnaire by substituting some key words in some items.

After having finalized the other research tools, data collection for final phase of the study was undertaken over a sample of 400 students. All the three tools namely the Religiosity questionnaire, Rotter's locus of control scale and Teacher mental health (TMHS) were administrated personally by the investigator. The investigator employed cluster-sampling techniques for selecting the subjects.

All chairpersons of art and science departments in Urmia University assisted the investigator in the selection of the students. All possible efforts were made to make the students feel at ease and respond to the various tests with full concentration. All queries were answered so as to satisfy their curiosity and motivate them to answer the
questionnaire carefully. They were informed that the results would be kept strictly confidential and that their cooperation was essential as the findings of the research would be beneficial to all present and future students.

3.3.5 Statistical techniques:

For the statistical analysis of the data following techniques were employed.

3.3.5.1 Descriptive Analysis:

Descriptive statistics such as M, S.d. , Sk and Ku were computed to study the nature of distribution of all the variables of religiosity, locus of control and mental health.

3.3.5.2 Differential analysis:

The t-ratio and f-test were obtained to find out the significance of difference between the means of: art/science, male/female, married/ unmarried, urban/ rural, employed/unemployed(arts science, agriculture, engineering) faculties, average of diploma, average of university, academic groups(freshman, junior, senior), period of urban residence, age groups, and internally/externally controlled students in respect of religiosity, locus of control and mental health variables.
3.3.5.3 Correlations:

Pearson’s coefficient of correlation was worked out to study the inter-relationship between religiosity, locus of control and mental health variables.

3.3.5.4 Graphic representation:

Graphic representation of the three variables, religiosity, locus of control and mental health were made to show the comparison between the art/science, male/female, married/unmarried, urban/rural, employed/unemployed, faculty type: arts/science/agriculture/engineering, average of diploma, average of university, academic groups: freshman/junior/senior, urban residence, age groups, and internally/externally controlled students at bachelor level.

3.3.6 Processing of data:

The raw data was statistically treated and processed by SPSS tenth version installed on Pentium -III computer.