CHAPTER III

METHODOLOGY

3.1: Introduction

This chapter describes the methodology of the study including aim and objectives, hypotheses, participants, design of study, instruments, procedure, nature and size of the population and sample selected, and the statistical techniques employed for analysis and interpretation of the data.

3.2: Aim of the Study

The main aim of the study was to examine the proneness to various Psycho-Somatic disorders and quality of life among delinquents and normal juveniles in Iran. The purpose of the present study was also to determine whether the proneness to various Psycho-Somatic disorders and quality of life is more significantly found either with delinquents or normal juveniles.

3.3: Objectives

1. To assess the prevalence of various Psycho-Somatic disorders among delinquents and normal juveniles.
2. To assess the quality of life among delinquents and normal juveniles.

3. To find out whether there is difference between delinquents and normal juveniles in their experience of various Psycho-Somatic disorders and quality of life.

4. To find out the relationship between various Psycho-Somatic disorders and quality of life among delinquents and normal juveniles.

5. To study the influence of secondary variables (age, education, and father’s occupation) on various Psycho-Somatic disorders and quality of life of delinquents and normal juveniles.

3. 4: Hypotheses

Following alternative hypotheses were formulated for the present study:

1) Delinquents and normal juveniles differ significantly in their experience of various Psycho-somatic disorders.

2) Delinquents and normal juveniles differ significantly in their quality of life.

3) There will be a significant relationship between experience of various Psycho-somatic disorders and quality of life experienced by delinquents and normal juveniles.

4) Secondary variables (age, education, father’s occupation) significantly influence on various Psycho-somatic disorders experienced by delinquents and normal juveniles.

5) Secondary variables (age, education, father’s occupation) significantly influence the quality of life experienced by delinquents and normal juveniles.
3. 5: Research design

The present study employed descriptive and comparative study design. Descriptive research is also called Statistical Research. The main goal of this type of research is to describe the data and characteristics about what is being studied. The idea behind this type of research is to study frequencies, averages, and other statistical calculations. Although this research is highly accurate, it does not gather the causes behind a situation. Descriptive research is mainly done when a researcher wants to gain a better understanding of a topic.

For example, in the present study, we know there are differences between delinquents and normal juveniles, but don’t know the difference in what aspect, or how much is it, and so have to carry out research in order to gain a better understanding.

In other words, descriptive research is the exploration of the existing certain phenomena. The details of the facts won’t be known. The existing phenomena’s facts are not known to the persons.

Indeed, descriptive research collects data in order to answer questions about the current status of the subject or topic of study.

3. 6: Instruments

The following instruments were employed in the present investigation:

a. Short Interpersonal Reactions Inventory (SIRI)
b. Quality of life questionnaire (QOL-WHO-BREF)

c. Demographic data sheet

3. 6. 1: Short Interpersonal Reactions Inventory (SIRI)

This scale developed by Grossarth-Maticek and Eysenck, (1990, cited by Amelang, 1992) is constructed on the premise that personality and stress are casually related to cancer and other diseases. The tool contains 70 questions, divided into six sub groups, which define 6 different types of personality proneness to different diseases. The six types are cancer prone, CHD prone, psychopathic behavior, healthy personality, depression prone and addiction prone. The scale has adequate predictive validity and reliability (test-reset correlation coefficient in excess of .80). High score indicates the severity of proneness in each sub type of proneness.

Since none of the respondents had any knowledge of the English language, the SIRI questionnaire was translated into Persian by the researcher. Internal consistency (reliability) of the Persian version was 0.802 which has been measured by Guttman Split-Half Coefficient.

3. 6. 2: Quality of life questionnaire (QOL-WHO-BREF)

The WHOQOL-100 assessment was developed by the WHOQOL Group with fifteen international field centers, simultaneously, in an attempt to develop a quality of life assessment that would be applicable cross-culturally. The development of the WHOQOL-100 has been detailed elsewhere (Orley & Kuyken, 1994; Szabo, 1996; WHOQOL Group 1994a, 1994b, 1995).
The WHOQOL -100 allows detailed assessment of each individual facet relating to quality of life. In certain instances however, the WHOQOL -100 may be too lengthy for practical use. The WHOQOL -BREF Field Trial Version has therefore been developed to provide a short form quality of life assessment that looks at Domain level profiles, using data from the pilot WHOQOL assessment and all available data from the Field Trial Version of the WHOQOL -100. Twenty field centers situated within eighteen countries have included data for these purposes. The WHOQOL -BREF contains a total of 26 questions. To provide a broad and comprehensive assessment, one item from each of the 24 facets contained in the WHOQOL -100 has been included. In addition, two items from the overall quality of life and General Health facet have been included (WHO, 1996).

Often of the studies were performed in countries with different cultures and languages (Yao and Wu 2005; Leunget al. 2005; Chien et al., 2007; Yao et al. 2008). One of these studies conducted in Iran by Nedjat et al. (2008) produced acceptable reliability (0. 550. 84) and discriminate validity for the interview version of the WHOQOL -BREF. This instrument also demonstrated statistically significant correlation with the Iranian version of the SF-36. However, their sample was limited to urban population in Tehran, Iran; also, they did not apply factor analysis (Nedjat et al., 2008).

As a developing nation, Iran is committed to the citizens’ well-being as well as to the improvement of quality of life. In this respect the WHOQOL -BREF, a short version of the WHOQOL -100, is developed for cross cultural comparisons of quality of life, encompassing four domains of life profiles. In view of the prevailing gap,
Usefy et al. (2010) designed a study to examine the psychometric properties of the WHO QOL-BREF in terms of reliability and validity, factor structure, and factor loading, using heterogeneous data from healthy and unhealthy urban and rural regions of three districts in the central part of Iran, namely, Isfahan, Najaf-Abad, and Arak (Sarrafzadegan et al. 2003, 2006). The rationale for selection of the sample was basically our interest in examining the applicability of this instrument, despite the variations in the citizens’ socio-economic status and the instrument’s usefulness to health and social services. This is a preliminary effort to avail ourselves of the advantages of a measure of quality of life, which is easy, comprehensive and valid, such as the WHOQOL-BREF, and which can be used in future epidemiological and outcome studies.

The Iranian version of the WHOQOL-BREF domain scores demonstrated good internal consistency, criterion validity, and discriminate validity. The physical health domain contributed most in overall quality of life, while the environment domain made the least contribution. Factor analysis provided evidence for construct validity for four-factor model of the instrument. The scores of all domains discriminated between healthy persons and the patients.

3. 6. 3: Demographic data sheet

The socio-demographic data for the present research was elicited using this personal data sheet which was prepared by the researcher himself. This is a detailed table, comprised of the provision to collect data on age, education and father’s occupation.
3.7: Procedure

The procedure of research had three steps as follows:

✓ Step 1: Planning and primary study of the variables.
✓ Step 2: Sampling and selecting participants
✓ Step 3: Data collection and test administration.
✓ Step 4: Statistical analysis.

3.7.1: Planning and primary study of the variables

Regarding the variables, population and after consultation with Project Supervisor and other professionals, two questionnaires were chosen. Also, in order to get the entrance permission for penitentiary, coordination and approval was required which took about a month to be fulfilled.

3.7.2: Sampling and selecting participants

The study population consisted of juvenile delinquents living at the juvenile corrective institutions as well as students in middle and high schools. Two groups of samples (Total 287) were selected from Khorasan Razavi province, Iran (The first group was the 143 juvenile delinquents were kept in penitentiary centers; and the second group including 144 normal students that had educated in middle and high schools).

Stratified random sampling technique was employed for sample selection. Stratification was based on type of the institution (middle school, high school, or
juveniles at corrective institution). The age of the adolescents in both groups ranged from 12 to 19 years. The most participants in delinquents group 17 years (39.2%), and in normal group were 16 years old (27.8%).

Table 3.1: Distribution of the sample in 2 groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>Number</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juvenile delinquents</td>
<td>143</td>
<td>287</td>
</tr>
<tr>
<td>Normal students</td>
<td>144</td>
<td></td>
</tr>
</tbody>
</table>

3.7.3: Data collection and test administration

A number of 150 Short Interpersonal Reactions Inventory (SIRI); (containing 70 questions, divided into six sub groups, which define 6 different types of personality proneness to different diseases; for determine the prevalence of Psycho-Somatic disorders) and 150 quality of life (QOL-Brief) questionnaire (for assessment of quality of life status) were administered to the two groups of normal juveniles and delinquents.

Since the original questionnaire of SIRI was prepared in English and on the other hand, none of the participants were not familiar with the English language; the questionnaire was translated into Persian language by the researcher.
After collecting and reviewing, a number of the questionnaires were eliminated for different reasons, and finally, 143 questionnaires from the delinquents group, and 144 questionnaires from the normal group (total 287), were prepared for analysis.

3.7.4: Statistical analysis

Based on the aims and hypotheses, the data compiled in this study was treated with the following statistical techniques.

1. Descriptive statistics

In order to describe the demographic data, such as age, father’s occupation and level of literacy, Descriptive statistics such as frequency, percentages, mean ... was used. We provided summary information about the distribution, variability, and central tendency of variable.

2. Independent samples ‘t’ test

Independent samples ‘t’-test were used in hypotheses 1 and 2, to determine of differences between normal and delinquent juveniles in, as well as to determine of differences between normal and delinquent juveniles in their quality of life. Results of independent t-test regarding to first and second hypotheses showed that delinquents and normal juveniles in their experience of various psycho-somatic disorders and in their quality of life differ significantly.
3. Pearson’s product-moment correlation

Pearson’s correlation was used in the third hypotheses: “there will be a significant relationship between experience of various psycho-somatic disorders and quality of life experienced by delinquents and normal juveniles”. The Pearson’s coefficient of correlation showed that the relationship of Cancer and CHD with total Quality of life and all its subscales were statistically significant, and there was no significant correlation between Psychopathic behavior and Depression with Quality of life and its subscales.

4. Regression analysis

Multiple regression was used in third hypothesis to assess the multiple coefficient of correlation between Psycho-Somatic disorders and quality of life in two groups. It was found that, variables such as Cancer, CHD, Psych, Healthy, Addiction, and Depression, as predictors and Quality of life as a response variable were entered into the regression equation with the enter method. The regression coefficients indicate that among Psycho-Somatic disorders CHD ($\beta=0.16$, $t= 2.12$, $p<0.05$) could bring a change in quality of life.

5. Multivariate Analysis Of Variance (MANOVA)

Multivariate Analysis Of Variance (MANOVA) was used in fourth and fifth hypotheses that are Influence of secondary variables such as age, education and father’s job on Psycho-Somatic disorders and Quality of life and groups.

All these statistical calculations were done through SPSS for windows (version 16.0).