



CHAPTER III

RESEARCH DESIGN OVERVIEW

Numerous correlational and prediction studies were conducted concerning with determining the extent of relationship existing between variables. Correlation techniques are particularly useful in making prediction. If it is known that there is a correlation between two variables, then it can be predicted from one variable to another. The strength of the relationship between two variables is given by computing coefficient of correlation. This is a useful tool for describing the magnitude and the direction of relationship. (Ary, D. et al 1979).

Much research on prediction had been carried out in the field of scholastic success like success in SBE in nursing programs, NBME in medical educational programs and so forth. The result of these studies are reviewed in chapter II. So far some studies have aimed at short-term prediction of the students' performances in a specific course of study, while other studies have been aimed at long-term prediction of general academic success. A great deal of research has also been done to devise the prediction equations. Much prediction

research has been based on the association between variables. An attempt was made to discover and clarify relationship between the variables through various correlational techniques, for instance Pearson product moment correlation coefficient, stepwise multiple regression analysis, point biserial, canonical correlation and so forth. Different schools enroll the students in different courses based on their own emphasis and grading standards. Therefore it is generally necessary to prepare separate equations for different schools. (Mouly, G. J. 1970). In addition, the subjects, predictors and criterion variables are also different. For this reason, the prediction studies vary depending upon the nature of the population under study and number and type of predictor and criterion variables used. (Keeves, J. P. ed., 1988).

3.1 JUSTIFICATION OF STUDY QUESTIONS

There is no evidence of study on relationship between admission criteria and academic performance of students of certificate level nursing. The predictive power of the admission criteria is unknown too. The review literature revealed no previous basis for Nepal nursing educational program. The study population, the predictor and criterion variables are different from Nepalese educational system.

Thus, this study is designed to discover and

clarify the relationship between admission criteria and academic performance of nursing students of certificate level nursing program. This study has been undertaken to explore the predictor variables related to prediction. It may be also helpful and useful to the empirical situation and serve as a base line data for further correlational studies in nursing educational program. It is hoped that it may help the admission committee to make a sound admission policy on the basis of empirical evidence.

3.2 RESEARCH QUESTIONS:

The present study is designed to answer the following questions:-----

1. What is the relative importance (strength of association) among the scores of various subjects required by the admission criteria for the certificate level nursing program in predicting students' performance on institute final examination ?
2. Do the following variables correlate with institute final examination performance ?
 - 2.1. Previously earned academic certificate.
 - 2.2. Previous work experiences related to nursing.
 - 2.3. Parents' occupation.
 - 2.4. Resident.
 - 2.5. High school rank.
 - 2.6. Age in months.

2.7. Marital status.

2.8. The campus the student attended.

3.3 RESEARCH OBJECTIVES

The followings are the objectives of proposed study:-

1. To determine the strength of association between admission criteria and institute final examination.
2. To determine which of the variable of admission criteria are important and which are not for predicting institute final examination.

3.4 OVERVIEW OF THE STUDY DESIGN

This study is a correlational research design to clarify the relationship between admission criteria and performance on institute final examinations in certificate level of nursing program. The intention of this design is to determine the magnitude of relationship and its predictive value. A diagram of the study design is presented in Figure 3.1.

The sample consists of graduate nurses of 1986 to 1989 from all nursing campuses in Nepal. This study concerns with certificate level of nursing program only. The criterion variable, the dependent variable, for present study is institute final examination (IFE). The predictor variables, the independent variables,

include three compulsory subjects of admission criteria, total SLC scores, previously earned academic certificate, previous work experiences related to nursing in years, age in months, high school rank, resident, occupation of parents, attended campus, and marital status. The actual relationship between measured variables are not so simple. One variable is found associated with or dependent upon, more than one other variable at the same time. When it is predicted that one variable from the knowledge of several others correlated with it, it is called that one variable, the dependent variable and the ones upon which it depends, the independent variables. The independent variables are so called because they vary by the nature of things and consequently it is expected the dependent variable to vary accordingly.

The data have been collected from records of scores from all nursing campuses. Data have been coded to assure confidentiality of information. Multiple regression analysis was employed for data analysis. At the same time, cross-validation has been performed using second sample after assigning the subjects randomly into two halves.

A DIAGRAM OF STUDY DESIGN

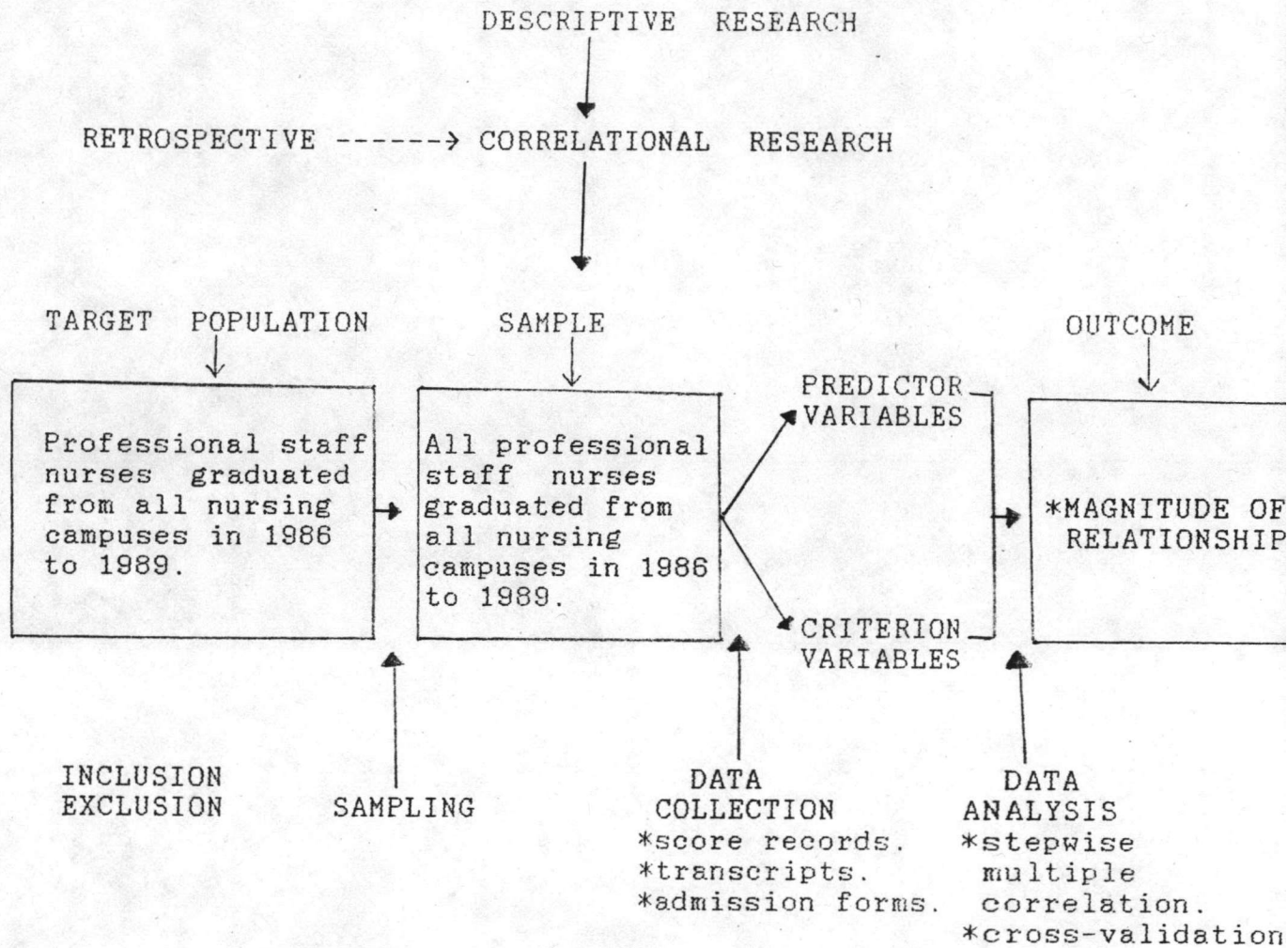


FIGURE 3.1. Overview of the study design.

3.5 DESIGN JUSTIFICATION

The experimental manipulation is impossible in some cases. It may be impossible to assign some subjects to the treatment and to withhold that same treatment from others. This type of impossibility might arise out of either practical or ethical considerations. But it may still be useful to determine whether a relationship exists even if we cannot be sure that there is a causal relationship. If a researcher is able to demonstrate even in absence of experimental design that there is relationship between some treatment and some outcome, then this is very strong evidence. (Vockell, E. L., 1983).

As stated before, this study is a correlational design that has been considered the standard and is appropriate to answer the stated research questions of this study. The research questions demand the clarification of relationship between admission criteria and nursing academic performance on institute final examinations. For this reason, this design is only suitable to clarify relationship and prediction of variables through use of correlation coefficients. This study design permits measuring a number of variables and their interrelationship simultaneously. It also permits the studying of behavior in a far more realistic setting and provides the information concerning degree of relationship between two variables.

Prediction is also possible based on association between variables being studied. It only identifies what goes with what. It does not necessarily identify cause and effect relationship.

Human behavior is complex at both individual and social level. This complexity is known little. One of the way to understand complex human behavior is to begin by teasing out simple relationship between those factors and elements deemed to have some bearing on phenomena in questions. The value of correlational research is that it is able to achieve this end. (Coher, L. and Manion, L., 1980). Correlational techniques are generally intended to clarify the magnitude and direction of relationship.

The correlational research is appropriate where the objectives is to achieve some degree of prediction and when there is a need to discover relationships. The correlation coefficient will achieve these ends. Therefore, it seems logical to take view that the correlational research is justifiable.

3.6 OPERATIONAL DEFINITIONS OF VARIABLES:---

Predictor variables refer to the information that is used typically to make a prediction. Predictor variables can be either quantitative or qualitative.

Criterion variables refer to the event or outcome to be

typically predicted. Criterion variables can be either quantitative or qualitative.

Prediction refers an effort to describe what will be found concerning an event or outcome not yet observed on the basis of information considered to be relevant to the event.

Parents' occupation which refers to the type of work the parent do for a living is measured as follows:

CATEGORY

None

Farmer

Service

Business

Professional-Managerial

Relationship: this context refers to any tendency for two variables or sets of data to vary consistently.

Correlation: the degree to which two or more events are related.

Professional staff nurse: the graduated nurse who had completed recognized and prescribed certificate level of nursing course successfully.

Resident refers to the two categories that are urban and rural.