CHAPTER- 3

RESEARCH METHODOLOGY

SECTION - A

(Case Study)

This chapter outlines the study design, sampling, data collection, and analysis procedures used in this research. A case study approach was adopted to gather data directly from students who had dropped out of school in Bhopal.

3.1 Study Design and Population

A descriptive case-study design was used to investigate school dropouts in Bhopal. The study population consisted of adolescents (roughly ages 5–18) who had discontinued formal schooling. A purposive sampling approach was employed: respondents were selected randomly from the community. In total, 16 respondents (a convenience sample size for case study) were surveyed. This sample size is adequate for producing narrative analysis of cases and descriptive statistics, though it may not be statistically representative of all dropouts in Bhopal.

3.2 Data Collection Instrument

Data were collected using a structured questionnaire (see Appendix A). The questionnaire was developed based on the research objectives and similar studies on dropouts. It was divided into sections covering:

Demographic information: age, gender, area of residence (urban or rural), and parental background.

Educational history: grade at which the student dropped out, type of school attended, distance to school.

Reasons for dropout: respondents indicated primary reasons for leaving school (e.g. financial constraints, family duties, school environment issues, health problems, etc.). Multiple responses were allowed if applicable.

Current occupation or activity: whether the respondent was employed (type of job), engaged in domestic work, or other.

School environment: questions on the facilities available in the school attended (toilet, drinking water, electricity, etc.) and perceptions of teacher attendance.

The questionnaire was first reviewed by education experts (guides) to ensure it was clear and appropriate. I then conducted the survey in either Hindi or English, depending on what each respondent preferred. Before starting, I explained the purpose, obtained their verbal consent, and assured them that their responses would remain confidential.

3.3 Data Analysis

After data collection, responses were coded and entered into Microsoft Excel for analysis. Descriptive statistics were computed, including frequency counts and percentages for each variable. Cross-tabulations were created to examine relationships between categorical variables (e.g., gender vs. dropout reason, area vs. facilities). Charts (bar graphs and pie charts) were also constructed for key variables to visualize distributions. For this study, simple visual tools like bar charts and pie charts were used to make the data easier to understand. For instance, a bar chart was created to compare how many boys and girls had dropped out, while a pie chart showed the different reasons students gave for dropping out. The goal was to spot common patterns in the data, not to test any specific theories. Because of this, the study didn't use complex statistical methods—just straightforward, descriptive analysis. The results of this analysis are shared in Chapter 4.

Overall, this approach helped paint a clear picture of the students who had dropped out and their experiences. Although the number of participants wasn't very large, it was enough to highlight key trends. The structured way the study was carried out adds to the reliability of what was found.

3.4 Ethical Considerations

We received ethical approval for the study from the Regional Institute of Education, Bhopal. Everyone who took part did so willingly, and their identities were kept completely anonymous. Participants were free to skip any question they didn't feel comfortable answering or stop participating at any time. We made sure to approach sensitive topics—like income or family matters—with extra care and respect.

SECTION- B

(Data and Methodology used for Objective Four)

In this section we explain the data and methodology used for calculation of objective four.

3.5 Source of data

Data for the study has been obtained from the National Family Health Survey (NFHS-5), conducted in 2019-21. The study focussed on household questionnaire, especially on the section of education. NFHS-5

field work was conducted from June 2019 to April 2021 and gathered information from 601,509 households and 2869,043 persons. Out of 2869,043 persons 809,312 children age of 5-18 were selected for the sample.

3.6 Description of variables and Methodology

As mentioned above the study has taken 809,312 children age of 5-18 as sample. The whole analysis has done based on two questions placed in household questionnaire.

1. "Did (NAME) attend school or college at any time during the 2019-20 school year?" The question has asked for age group of 5 to 18. Out of total 809,312 sample children 125,241 children reacted that they did not attend school during the academic year 2019-20 even at once. The study has considered these children as school dropouts.

2. "What is the main reason (NAME) is not attending school?" (if the respondent say "NO" on second question). This question has asked to the respondent if he/she did not attend the school at any time during the 2019-20 school year. The important reason was stated by the household respondent, mainly by either of the parents or other family members, and was not given by the child who actually dropped out of school. Out of 125,241 children the respond for this question got for 67,182 children only.

3.6.1 To understand the main reasons for school dropout in India

To fulfil this sub-objective the question I.e., "What is the main reason (NAME) is not attending school?" has been analysed intensively. The question has provided 15 main reasons out of which some are related to family related like required for household work, required for care of siblings, got married etc., school related reasons like cost too much, no proper school facilities for girl etc. and children related reasons like not interested in studies, repeated failures etc. To make the study meaningful these 15 reasons have categorized into three categories, namely family related, school related and children related reason. The classification of reasons is as follows:

Reason for not attending school	Category
1. Not interested in studies 2. Repeated failures	Children related
1. School too far away 2. Transport not available 3. Costs too much 4. No proper school facilities for girls 5. Not safe to send girls 6. No female teacher 7. Did not get admission	School related

1.	Further education not considered necessary	Family related
2.	Required for household work	
3.	Required for work on farm/family business	
4.	Required for outside work for payment in cash or kind	
5.	Required for care of siblings	
6.	Got married	

By using SPSS and STATA software the analysis has done for different crosstabs which shows the association between the reasons of school dropout and other demographic characteristics viz, level of education, religion, caste, wealth status, among different regions, sex and residence.

3.6.2 To examine the determinants of school dropout in India

To achieve this sub-objective the children who dropped out of school are used as dependent variables. Sex, place of residence, household size, caste, religion, sex of household head, wealth and regions in India are used as independent variables. Logistic regression-where there should be two categories, like yes and no, under the dependent variable-has been used to show the influence of selected household characteristics on school dropout. STATA software has been used to analyse the logistic regression between respected independent and dependent variables. Logistic Regression models are commonly estimated by maximum likelihood function. For these outcome variables, logistic regression model takes the form:

$$\textbf{Log (P/1-P) = } \beta_0+\beta_1X_1+ \beta_2X_2 + \beta_3X_3 \ldots\ldots\ldots\ldots \beta_nX_n$$

Where Xi's are covariates and βi's are coefficients. P is predicted probability and log odds of P and (1-P) provides the odds ratios with respect to reference category.

3.6.3 To analyse the reginal variation in school dropout in India

To show regional differentials of school dropout in India, all states and union territories have been classified into six regions, viz, North, Central, East, Northeast, West and South, on the basis of their geographical existence. The classification of states and union territories is as follows:

Classification of states & UT into regions: (According to NFHS-5 National report)

	State/UT	**Region**
1.	Chandigarh	**North**
2.	Delhi	
3.	Haryana	
4.	Himachal Pradesh	
5.	Jammu &Kashmir	

6.	Punjab	
7.	Rajasthan	
8.	Uttarakhand	
1.	Chhattisgarh	**Central**
2.	Madhya Pradesh	
3.	Uttar Pradesh	
1.	Bihar	**East**
2.	Jharkhand	
3.	Odisha	
4.	West Bengal	
1.	Arunachal Pradesh	**Northeast**
2.	Assam	
3.	Manipur	
4.	Meghalaya	
5.	Mizoram	
6.	Nagaland	
7.	Sikkim	
8.	Tripura	
1.	Dadra &Nagar Haveli	**West**
2.	Daman &Diu	
3.	Goa	
4.	Gujarat	
5.	Maharashtra	
1.	Andaman &Nicobar Islands	**South**
2.	Andhra Pradesh	
3.	Karnataka	
4.	Kerala	
5.	Lakshadweep	
6.	Puducherry	
7.	Tamil Nadu	
8.	Telangana	

The sub-objective contains differentials of children age 5-18 who dropped out of school. By using "ArcGIS" software the prevalence of school dropout children has distributed spatially through all regions in India. And to find "hot spots and cool spots" of prevalence of children dropped out of school the "GeoDa" software has been utilized. Finally, the study has found some districts with high prevalence of school dropout and some districts as hot and cool spots.