Methodology means the philosophy of the research process. This includes assumptions and values that serve as a rationale for research and the standards or criteria the researcher uses for interpreting data and reaching conclusions. At present moment it is felt to distinguish three basic terms used in the research work. The terms like methodology, method and technique are to be understood in clear terms.

A methodology is the analytical study of methods. On the other hand, a method is the broad category, which includes many techniques used to ensure successful field enquiry. Where as a technique is an actual device, a means or a procedure for collecting and processing data in the particular context of a scientific enquiry. For sociology the trend is analytical and in most cases deductive. In cultural anthropology generally inductive principles are adopted. However, the present researcher has used both the quantitative and qualitative methods in order to study the present of ‘Depression and Care among the Marwari Community’. The method collecting data in the field is an important factor because the value of reports depends on the methods of enquiry.

Selection of the Problem

The present work was carried out to study the condition of the aged in the Marwari society. Ageing is a natural Universal phenomenon. No one can escape the law of nature. The Marwari society still largely being traditional where the family and kinship ties are still strong, the aged are not considered a problem. But modernization, urbanization, industrialization, migration of young members, breaking up of joint family system etc. have made the condition of the Marwari aged vulnerable. Now they are facing so many problems such as health, physical, socio-psychological etc. in the changing situations. So an attempt has been made to identify and understand the condition of the Marwari elders of South Kolkata, based on empirical field data. The present work reveals authentic information pertaining to health, economic role relationship and socio-psychological conditions of the aged Marwaris of South Kolkata.

Selection of the Area: Venue of the Present Fieldwork

Area of survey is technically known as the field. As for present research work, the survey site is some of the wards (Ward No.-65, 69 and 70) of South Kolkata in West Bengal. Further, some respondents from an Old Age Home named as ‘Apna Asiyana’ which is situated in
Hooghly Subdivision near Tarakeshwar has been interviewed. This Home is managed by Marwari community and all most all the residents are of Marwari origin.

**Duration of the Field Work**

The field work among the aged Marwaris of South Kolkata, West Bengal was carried out in several phases from 2009-2010.

To conduct the above-mentioned study the researcher would use both quantitative and qualitative methods. Although it is common in the social sciences to draw a distinction between qualitative and quantitative aspects of scientific investigation, it has been argued that the two may go hand in hand. For example, based on analysis of the history of science, Kuhn (1961, p. 162) concluded “large amounts of qualitative work have usually been prerequisite to fruitful quantification in the physical sciences”. Qualitative research is, in some cases, instrumental to developing an understanding of phenomena as a basis for quantitative research. Similarly, quantitative research may inform, or be drawn upon in the process of qualitative research. Quantitative methods might be used with a comprehensive qualitative frame. Qualitative methods might be used to understand the meaning of the numbers produced by quantitative methods. Using quantitative methods, it is possible to give precise and testable expression to qualitative ideas. This combination of quantitative and qualitative data gathering is often referred to as mixed-methods research.

**Quantitative Research Methods:**

In very broad terms the Quantitative Research was described as entailing the collection of numerical data and as exhibiting a view of the relationship between theory and research as deductive, a predilection for a natural science approach and as having an objectivist conception of social reality.
The process of quantitative research is:-

Theory
↓
Hypothesis
↓
Research Design
↓
Device measures of Concepts
↓
Select research sites
↓
Select research subjects/ respondents
↓
Administer research instruments/collect data
↓
Process data
↓
Analyse data
↓
Findings/conclusions
↓
Write up findings/ conclusions

The above figure outlines the main steps in quantitative research. This is very much an ideal typical account of the process: it is probably never or rarely found in this pure form. Yet the present researcher has tried to follow the above mentioned steps in order to conduct the research successfully.
The fact that we start off with theory signifies that a broadly deductive approach to the relationship between theory and research is taken. It is common for outlines of the main steps of quantitative research to suggest that a hypothesis is deduced from the theory. The present researcher has formulated few hypothesis deduced from several theories. The hypotheses have been tested by Pearson Chi-square tests to state whether they are significant or insignificant. The **Chi Square** $(X^2)$ test is undoubtedly the most important and most used member of the nonparametric family of statistical tests. **Chi Square** is employed to test the difference between an actual sample and another hypothetical or previously established distribution such as that which may be expected due to chance or probability. **Chi Square** can also be used to test differences between two or more actual samples.

**Basic Computational Equation:**

$$X^2 = \sum \frac{(\text{Observed frequency} - \text{Expected frequency})^2}{\text{Expected frequency}}$$

$$X^2 = \sum \frac{(\text{Observed frequencies} - \text{Expected frequencies})^2}{\text{Expected frequencies}}$$

$$= \sum \frac{(F_o - F_e)^2}{F_e}$$

The next step entails the selection of a research design. The selection of research design has implications for a variety of issues, such as the external validity of findings and researcher’s ability to impute causality to their findings. Step 4 entails devising measures of the concepts in which the researcher is interested. This process is often referred to as operationalization, a term that originally defines from physics to refer to the operations by which a concept is measured.

The next two steps entail the selection of a research sites and then the selection of subjects or respondents. Thus in social survey research an investigator must first be concerned to establish an appropriate setting for his or her research.
Step 7 involves the administration of the research instruments. In cross-sectional research using social survey research instruments, it will involve interviewing the sample members by structured interview schedule or distributing a self-completion questionnaire.

**PILOT STUDY**

Here, a very important point needs to be noted that before conducting the actual survey, the researcher undertook a pilot study with 20 schedules and necessary modification of the final questionnaire was done on the basis of the pilot study. Pilot study is very necessary in survey research for right question preparation. It helps to avoid irrelevant research questions and makes the research work accurate.

Step 8 simply refers to the fact that, once information has been collected, it must be transformed into data. In the context of quantitative research, this is likely to mean that it can be quantified. With some information this can be done in a relatively straightforward way. For other variables, quantification will entail the coding of information-that is transforming it into numbers to facilitate the quantitative analysis of the data, particularly if the analysis is going to be carried out by computer.

**CODING**

Coding is a key stage in quantitative research. It entails two main stages: first, the unstructured material must be categorized. For example, with answers to an open question, this means that the researcher must examine people’s answers and group them into different categories. Secondly, the researcher must assign numbers to the categories that have been created. This is a largely arbitrary process, in the sense that the numbers themselves are simply tags that will allow the material to be processed quantitatively. The present researcher has used the method of coding to analyze the data.

There is an important distinction between pre-coding and post-coding. Many closed questions in survey research instruments are pre coded. This means that respondents are being asked to assign themselves to a category which has already had a number assigned to it. Post coding occurs when answers to an open question are being coded.
When coding, three basic principles need to be observed (Bryman and Cramer, 2004). Firstly, the categories that are generated must not overlap. If they do, the numbers that are assigned to them cannot be applying to distinct categories. Secondly, the list of categories must be complete and therefore cover all possibilities as far as possible. Quantitative data are also sometimes recoded. For example, if we have data on the exact age of each person in a sample, we may want to group people into age bands. The present researcher has used the method of recoding in order to group people into age bands, income bands, educational bands and others.

This consideration leads to step 9- the analysis of the data. In this step, the researcher is concerned to use a number of techniques of quantitative data analysis to reduce the amount of data collected, to test for relationship between variables, to develop ways of presenting the results of the analysis to others, and so on. The present researcher has used the Statistical Package for Social Sciences (SPSS 17) in order to compute and analyze the data collected. The present researcher has constructed univariate and bivariate tables. In a bivariate table, two variables are cross-classified. Such a table consists of rows and columns; the categories of one variable are labels for the rows, and the categories of the second variable are labels for the columns. Usually, the independent variable is the column variable (listed across the top), and the dependent variable is the row variable (listed at the left side of the table). Further, Pearson Chi-square values have been computed in order to test the significance of hypothesis.

The research can now be written up. In writing up the findings and conclusions, the researcher is doing more than simply relaying what has been found to others; readers may be convinced that the research conclusions are important and that the findings are robust. Thus a significant part of the research process entails convincing others of the significance and validity of one’s findings. The present researcher has tried to give a complete detail of the field and respondents studied so that the research work is based upon accuracy.

**CONCEPTUALIZATION AND OPERATIONALIZATION**

Concepts are the building blocks of theory and represent the points around which social research is conducted. If a concept is to be employed in quantitative research, it will
have to be measured. Once they are measured, concepts can be in the form of independent or
dependant variable. In other words, concepts may provide an explanation of a certain aspect of
the social world, or they may stand for things we may explain. In the current research, the
researcher developed depression as a dependant variable and ageing, care, industrialization,
personality traits and all others as independent variables.

**DIMENSIONS OF CONCEPTS**

One elaboration of the general approach to measurement is to consider the possibility that the concept in which the researcher is interested comprises different dimensions. The current research is also based on several dimensions like socio-demographic, health, family care and others. For details one can refer to the objectives of the study.

**INDICATORS**

In order to provide to a measure of a concept it is necessary to have an indicator that will stand for the concept. There are a number of ways in which indicators can be devised: Through a question that is part of a structured interview schedule or self completion questionnaire. The questions could be concerned with the respondent’s attitude or their social situation or a report of their behavior. Through the recording of individual’s behavior using a structured observation schedule

Indicators then can be derived from a wide variety of different sources and methods. The present researcher has incorporated multiple indicators to tap the information. The questionnaire in the appendix may be referred to in order to locate multiple indicators used by the researcher.

Thus from the above discussion it is clear that the researcher needs to formulate a well structured questionnaire/schedule which may be self administered or filled up by the researcher on the basis of face to face interview. The present researcher conducted face-to-face interviews in order to complete the questionnaire/schedule.
Apart from the administration of the questionnaire Harvard National Depression Screening Scale\(^1\) has been used in order to measure the levels of depression. The results of the scale have been computed with the help of HTML version of the scale in order to know the respondent’s levels of depression. There are four levels of depression specified in the scale: Mild, Moderate, Severe and Major. The levels of depression increases from Mild to Major. Thus, respondents who are depressed at the highest level belong to the Major level, whereas, those at the lowest level belong to the mild levels of depression.

THE TOOL OF THE DATA COLLECTION: QUESTIONNAIRE/SCHEDULE:

TYPES OF QUESTIONS: Open Ended and Closed Ended

In an open ended question respondents can answer in their own terms. The researchers allow unusual questions to be derived. The open ended questions do not suggest certain kinds of answer to respondents; they are also useful for exploring new areas. Thus open ended questions are useful for generating fixed choice format answer. On the other hand there is the close ended question. Close ended questions are easy to process answers. It enhances the comparability of answers. It may clarify the meaning of a question for respondents. Close ended questions are also easy for interviewers and respondents to complete. In the present research, the researcher has used both open and close ended questions.

THE TECHNIQUE OF DATA COLLECTION: FACE-TO-FACE STRUCTURED INTERVIEW:

STRUCTURED INTERVIEW

A structured interview sometimes called a standardized interview entails the administration of an interview schedules by an interviewer. The aim is for all interviewees to be given exactly the same context of questioning. This means that each respondent receives exactly the same interview stimulus as any other. The goal of this style of interviewing is to ensure that

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\(^{1}\) Note: the details of the website containing HTML version of Harvard National Depression Screening Scale Measuring is given in the website http://www.neurotransmitter.net/depression scales.html
interviewees’ replies can be aggregated and this can be achieved reliably only if those replies are in response to identical cues. Interviewers are supposed to read out questions exactly and in the same order as they are printed on the schedule. Questions are usually very specific and very often offer the interviewee with a fixed range of answers. The structured interview is the critical form of interview in survey research. Over here the researcher has used both the interview and observation technique.

In order to conduct the interview process the researcher needs to keep certain points in mind. These are as follows:

**CONDUCTING INTERVIEW:**

**In order to conduct the interview monitoring in a proper way is necessary:**

**KNOWING THE SCHEDULE**

Before interviewing anybody, an interviewer should be fully conversant with the schedule. Interviewing can be stressful for interviewers and interviewee if the questionnaire/schedule becomes repetitive and monotonous. The present researcher has tried to ensure its non occurrence by repeated review of the questionnaire.

**INTRODUCTION OF THE RESEARCH TO THE RESPONDENTS**

Prospective respondents have to be provided with a credible rationale for the research in which they are being asked to participate and for giving up their valuable time. The introductory rationale may be either spoken by the interviewer or written down. In many cases, respondents may be presented with both modes. The present researcher has used both the modes.

Further, the interviewer kept calling back the interviewees whenever they are out or unavailable. This helped the researcher in taking into account people’s likely work and leisure habits. Moreover it was conveyed that the researcher is happy to find a time suitable to the respondent. In order to get a better response respondent’s consent to be
interviewed was taken before beginning with the entire process. The present researcher also took care of her dress so that it is acceptable to a wide spectrum of people interviewed.

**RAPPORT**

To make an in-depth study accurately a rapport is necessary for appropriate collection of data. This means that very quickly a relationship must be established that encourages the respondent to want to participate in and persists with the interview. Unless an element of rapport can be established, some respondents may initially agree to be interviewed but then may decide to terminate their participation because of the length of time the interview is taking or because of the nature of the questions being asked. While this injunction essentially invites the interviewer to be friendly with respondents and to put them at ease, it is important that this quality is not stretched too far. Too much rapport may result in the interview going on too long and the respondent suddenly deciding that too much time is being spent on the activity. Also, the mood of friendliness may result in the respondent answering questions in a way that is designed to please the interviewer. Thus, to avoid biasness during the collection of data over-rapport needs to be checked. The achievement of rapport between interviewer and respondent is therefore a delicate balancing act. Moreover, it is probably somewhat easier to achieve in the context on the face to face interview rather than the telephone interview, since in the later the interviewer is unable to offer obvious visual cues of friendliness like smiling or maintaining good eye contact, which are also frequently regarded as conducive to gaining and maintaining rapport. Hence keeping these points in mind, the researcher has conducted the survey by face to face interview.

The present researcher has taken the help of a Marwari lady in order to enter into the field. Prior rapport was established before administering the question to the respondents. However, extreme care was taken to avoid the problems of over rapport.

**ASKING QUESTIONS IN A PROPER WAY**

It was earlier suggested that one of the ends of the structured interview is to ensure that each respondent is asked exactly the same questions. The structured interview is meant to potential errors due to variation in the ways a question is asked.
Consequently it is important for interviewers to appreciate the importance of keeping exactly to the wording of the questions they are charged with asking. The present researcher has tried to follow it as far as applicable.

The key point to emerge, then, it is importance of getting across to interviewers the importance of asking questions as they are written. There are many reasons why interviewers may vary question wordings, such as reluctance to ask certain question, perhaps because of embarrassment, but the general admonition to keep the wording of the question needs to be constantly reinforced. The present researcher has tried to keep this point in mind.

**WRITING ANSWERS**

The respondents’ replies should be written down as exactly as possible. If it is not done then the respondent's answers may be distorted and hence introducing errors. Such errors are less likely to occur when the interviewer has merely to allocate respondents’ replies to a category, as in a closed question. This process can require a certain amount of interpretation on the part of the interviewer, but the error that is introduced is far less than when answer to open questions are being written down. Hence the present researcher has tried mostly close ended questions to avoid errors. However, a few are open ended questions where necessary precautions are taken.

**QUESTION ORDER**

In addition to being cautious of not varying the asking of questions and the recording of answers the interviewer should be alerted to the importance of keeping to the order of asking questions. It is to be noted that varying the question order can result in certain questions being accidently omitted because the interviewer may forget to ask those that have been leapfrogged during the interview. Also, variations in question order may have an impact on replies: if some respondents have been previously asked a question that they should have been asked where as others have not, a source of variability in the asking of questions will have been introduced and therefore a potential source of error. The present researcher has tried to ask the questions in order.
Thus, proper monitoring of the interview with the questionnaire/schedule is necessarily done in order to make the research accurate.

**PROBING**

It can be said that probing at times is a very necessary device to extract information from the respondents. If the respondent does not provide a sufficiently complete answer then probing becomes necessary in extracting the information. However, probing is a highly problematic area as the interviewers intervention may influence the respondent’s responses. Yet, the present researcher has been careful in using this technique.

In fine, interviewing the aged on familial and other such social issues in front of the family members would be embarrassing. So, as far as far as possible, much precaution was taken to avoid such situations. The subjects were interviewed in conductive environments where they felt free to express their views, feelings, opinions and also suggestions. But surprisingly, in sizeable cases the family members, particularly the daughter-in-law becomes very suspicious to their parents-in-law as if they would speak something against them. Thus, in such cases they intentionally tried to disturb the interviewer once again by repeated personal appearances the place of discussion. Even in some cases they constantly stood before the interviewer and instructed their parents-in-law not to disclose their family matters or speak out the truth. In such cases, the interviewer had to politely interfere in the matter to make the environment conductive to the farthest possible extent and in most of the cases the old persons fully cooperated with the interviewers to fulfill the purpose.

**Census Report**

This method is useful or collecting information on population, number of households and other demographic details. Census sheets usually contain basic biographical data like name, age, sex, residential history, as well as in formation on the educational background occupation, income and other economic resources of the household. Such reports have been used in order to add information to the research.
QUALITATIVE RESEARCH

Qualitative research differs from quantitative research in several ways. Most obviously, qualitative research tends to be concerned with words rather than numbers, but three further features were noteworthy: Firstly, an inductive view of the relationship between theory and research, whereby the former is generated out of the later. Secondly, an epistemological position described as interpretive, meaning that in contrast to the adoption of a natural scientific model in quantitative research, the stress is on the understanding of the social world through an examination of the interpretation of that world by its participant. Thirdly, an ontological position described as constructionist, which implies that social properties are outcomes of the interactions between individuals, rather than phenomenon “out there” and separate from those involved in its construction.

This predilection for seeing through the eyes of the people studied in the course of qualitative research is often accompanied by the closely related goal of seeking to probe beneath surface appearances. After all, by taking the position of the people one is studying, the prospect is raised that he/she might view things differently from what an outsider with little direct contact might have expected.

The empathetic stance of seeking to see through the eyes of one’s research participants is very much in tune with interpretivism and demonstrates well the epistemological links with phenomenology, symbolic interactionism and Verstehen. However it is not without practical problems. For example the risk of ‘going native’ and losing sight of what the researcher is studying; the problem of how far the researcher should go, which could be a risk in research and the possibility that the researcher will be see through the eyes of only some of the people who form part of a social scene but not others. In spite of the alone difficulties the present researcher has tried not to get out of focus. The attempt was always to represent the field accurately.

Qualitative researchers are much more inclined than quantitative researchers to provide a great deal of descriptive detail when reporting the fruits of their
research. This is not to say that they are exclusively concerned with description. They are concerned with explanation.

Observation Method

Observation method is used for collection of information by seeing the behavior of the individuals to be studied in its natural settings, to grasp the dynamic, situation based features of conduct.

The observation method may be of two types—participant observation and non-participant observation. In participant observation the observer always involves himself to some extent to the life and activities for the group. While in the later, one does not participate in the actual activity of the group, but collects data by observing them from a distance. In this present study the researcher was both a non-participant and participant observer. The participant observation has been employed in many situations like to grasp the nature of social gatherings in religious festivals, many a times the researcher herself attended the functions as an invited guest.

Case Study Method:

Case study is method of exploring and analyzing the life of a social unit (Kothari, 1999). Its goal is to determine the factors that account for the complex behavior pattern of the unit and the relationships of the unit to its surroundings. Case study may be gathered from the entire life cycle or on a definite section of the cycle of a unit, but always with a view of ascertaining the natural history of the social unit, and its relationship to the social factors and forces involved in its environment. The present researcher has adopted this method in order to capture the views and interpretations of the respondents from their perception. Several case studies have been discussed in this research work.

Audio Recording, Photography and Video Recording Technique:

With the advancement in the field of science and technology audio and video recording along with photography has been done in order to represent the field correctly. Photography and video recording has helped to capture the numerous moments of the respondent’s lifestyle under a single frame which has helped to conduct the research work accurately.
Sampling:

The present study is primarily based on the data relating to the aged (60+) members of the Marwari family of South Kolkata residing in the KMC wards of 65, 69 and 70 and inmates of an old age home named as ‘Apna Asiyana’ located near Tarakeshwar, in Hooghly district. Both male and female members have been included in the study. The total number of respondents in this study is 177.

Sampling in social research involves some key terms like population, sampling frame etc. Population- basically, is the universe of units from which the sample is to be selected. The sample is the segment of the population that is selected for investigation. It is a subset of the population. The method of selection may be based on probability or a non-probability approach. The present researcher has used non-probabily purposive sampling in order to conduct the current research. Purposive sampling is one in which the researcher purposively chooses persons who, in his/her judgement bears some appropriate characteristics required of the sample members, and are therefore thought to be relevant to the research topic. Sampling frame is the listing of all units in the population from which the sample will be selected. The present researcher has taken total sample frame in order to conduct the research. All the aged members of the Marwari community residing in the wards 65,69 and 70 of Kolkata Municipality along with the inmates of an old age home named ‘Apan Ashiyana’ located near Tarakeshwar in Hooghly District has been interviewed for the present research work.

The present work has been conducted with immense care so that the research is accurate. Lots of care has been taken to represent the field as accurately as possible.