Chapter – III

Research Methodology

“A Sociological study of health problems of Korku tribal in the Melghat sub-division” is an acerbic subject of research is aimed to achieving the objectives of this research study, descriptive and diagnostic research design is accepted. Classification of research occurs in accordance with its nature. Descriptive research method means to present facts and analyze them in a scientific manner. Descriptive research is inspired by the particular state of a person or a group, its features and qualities. Diagnostic research is inspired by the act of examining frequency of the events and its testing. For this study descriptive and diagnostic research design is prepared.

Generally, the active research design is presented in view of the following three aspects of the research;

1) Sample selection plan
2) Fieldwork plan
3) Statistical plan

Along with important aspects of the research, its limitations and problems faced during the research work are also discussed in some details.

Area of research:

The Research area of the present research includes Melghat region which is one of the sub-division of Amravati revenue division. Melghat region has two tehsils i.e. Chikhaldara and Dharni. These two tehsil of Melghat area has greater concentration of tribal population specially Korku community.

For the present study, 200 korku samples were selected from 197 villages of Chikhaldara tehsil and 150 korku samples were selected from 153 villages of Dharni tehsil.

Maharashtra government also have been implementing different welfare schemes including Health Care Services in Melghat tribal areas but the health
problem in this region is continued to be the same. Health problems have always significant co-relation in any society. Therefore health problems of korku tribal related to their social problems is taken up for the statistical analysis.

**Sample Selection Plan:**

All the Korku tribal from Melghat subdivision are supposed to be the collective subject of this study. From the point of view of generalization and limitation of the research work, 35 villages i.e. 10 percent of the total 350 villages from this Melghat sub-division are selected as the core content of this subject. The study covers the whole affairs of the Korku community which affect their social life related existence such as their food pattern, housing, economy etc.

**Sample design:**

In view of the objectives of the research to study the health problems of korku those units are included in the sample which may represent the whole. Out of the 350 villages from Melghat sub-division, 35 villages out of which 10 korku tribal- male and female each means 350 Korku tribal are selected as a study units for this research. Instead of studying the whole of the subject a method of representational selection is made. When some units are selected to get information about the world or to arrive at conclusion, these groups of units are known as sample.¹ This units represents complete research field and conclusion obtained through these unite are also represents whole.² According to Franks Yatts the unit selected with a view to representing the whole, may be named as sample.³ Sample selection is very important thing for the researcher. To explain this Broklan states, sampling technique helps to save money, labour, energy and time, a lot and representational conclusions are drawn.⁴ Sample selection helps to complete the research in time with a proper speed. The work of sample selection is required to be done carefully through scientific method. Otherwise one can arrive at wrong conclusions.

**Sample Selection Method:**

For the topic titled “A sociological study of health problems of Korku tribal in the Melghat sub-division”. Field Work Method has been adopted to select sample. For the purpose, social survey has been used. As the survey realistically and objectively depicts and collects the problematic facts, Social Survey Method has been given
importance. According to Morse H.N, “The social survey is, in brief, simply a method of analysis in scientific and orderly form, and far defined purpose of a given social situation or problem or population”\(^5\)

Prominently, there are two methods of sample selection.\(^6\)

1) Probable sample selection

2) Improbable sample selection.

For the study of the present subject, both the methods of sampling viz. probability and non probability samplings have been selected.

“When the probability of all the units being selected is the same, then it is called probability sampling. Each unit has accessibility to be selected. This method can hardly allow any kind of partiality.”\(^7\) The chief feature of probable sample selection method is that the researcher can state the exact possibility of inclusion of each unit.\(^8\)

**Size of sample:**

By using these methods whatever person or unit is convenient according to the researcher get selected. The selection of 35 villages from 350 villages means ten percent of the total villages are done by using probable sample selection method for the study purpose. Out of the 197 villages from Chikhaldara tehsil ten percent means 20 villages and from Dharani tehsil out of 153 villages 15 villages are selected. Thus, total 35 villages are selected. The selection of Korku’s villages of Melghat subdivision is done through probable sample selection by using the lottery method. Thereby, instead of selecting according to the interest of the researcher, an every village is given an equal opportunity of the selection among the all villages under scrutiny. Ten korku tribal (male and female) are selected as sample from each 35 villages means total 350 Korku tribal are selected by using this convenient sample selection method. Subject related required significant information is collected from them.

**Table no.3.1**

**List of the villages selected from Dharani Tehsil**
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of the village</th>
<th>ST population</th>
<th>Other population</th>
<th>Total population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Palaskundi</td>
<td>240</td>
<td>271</td>
<td>511</td>
</tr>
<tr>
<td>2</td>
<td>Hatnda</td>
<td>313</td>
<td>08</td>
<td>321</td>
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<tr>
<td>3</td>
<td>Jampani</td>
<td>451</td>
<td>07</td>
<td>458</td>
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<tr>
<td>4</td>
<td>Kalpi</td>
<td>586</td>
<td>59</td>
<td>645</td>
</tr>
<tr>
<td>5</td>
<td>Zapal</td>
<td>610</td>
<td>37</td>
<td>647</td>
</tr>
<tr>
<td>6</td>
<td>Laktu</td>
<td>611</td>
<td>57</td>
<td>768</td>
</tr>
<tr>
<td>7</td>
<td>Tatra</td>
<td>835</td>
<td>27</td>
<td>862</td>
</tr>
<tr>
<td>8</td>
<td>Chopan</td>
<td>461</td>
<td>05</td>
<td>466</td>
</tr>
<tr>
<td>9</td>
<td>Chethar</td>
<td>566</td>
<td>13</td>
<td>579</td>
</tr>
<tr>
<td>10</td>
<td>Didamba</td>
<td>917</td>
<td>75</td>
<td>992</td>
</tr>
<tr>
<td>11</td>
<td>Toli</td>
<td>647</td>
<td>20</td>
<td>667</td>
</tr>
<tr>
<td>12</td>
<td>Pankhalya</td>
<td>643</td>
<td>102</td>
<td>745</td>
</tr>
<tr>
<td>13</td>
<td>Chipoli</td>
<td>672</td>
<td>62</td>
<td>734</td>
</tr>
<tr>
<td>14</td>
<td>Rangubeli</td>
<td>364</td>
<td>25</td>
<td>389</td>
</tr>
<tr>
<td>15</td>
<td>Rora</td>
<td>364</td>
<td>85</td>
<td>449</td>
</tr>
</tbody>
</table>

Table no.3.2

List of the villages selected from Chikhaldara Tehsil:

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Name of the village</th>
<th>ST population</th>
<th>Other population</th>
<th>Total population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bhulori</td>
<td>574</td>
<td>01</td>
<td>575</td>
</tr>
<tr>
<td>2</td>
<td>Sawrya</td>
<td>164</td>
<td>102</td>
<td>266</td>
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<td>3</td>
<td>Lawada</td>
<td>273</td>
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<td>379</td>
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<td>6</td>
<td>Bichukheda</td>
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<td>36</td>
<td>264</td>
</tr>
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<td>7</td>
<td>Zingapur</td>
<td>281</td>
<td>02</td>
<td>283</td>
</tr>
<tr>
<td>8</td>
<td>Bori</td>
<td>370</td>
<td>31</td>
<td>401</td>
</tr>
<tr>
<td>9</td>
<td>Ektai</td>
<td>1044</td>
<td>43</td>
<td>1087</td>
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<tr>
<td>10</td>
<td>Chichati</td>
<td>391</td>
<td>Oo</td>
<td>391</td>
</tr>
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<td>11</td>
<td>Madki</td>
<td>396</td>
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<td>485</td>
</tr>
<tr>
<td>12</td>
<td>Hilda</td>
<td>349</td>
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<td>369</td>
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<tr>
<td>13</td>
<td>Domnifhata</td>
<td>183</td>
<td>00</td>
<td>183</td>
</tr>
<tr>
<td>14</td>
<td>Memna</td>
<td>170</td>
<td>02</td>
<td>172</td>
</tr>
<tr>
<td>15</td>
<td>Tarubanda</td>
<td>924</td>
<td>46</td>
<td>970</td>
</tr>
<tr>
<td>16</td>
<td>Nagartas</td>
<td>259</td>
<td>00</td>
<td>259</td>
</tr>
<tr>
<td>17</td>
<td>Amona</td>
<td>224</td>
<td>09</td>
<td>233</td>
</tr>
<tr>
<td>18</td>
<td>Kohi</td>
<td>554</td>
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<td>555</td>
</tr>
<tr>
<td>19</td>
<td>Pili</td>
<td>417</td>
<td>164</td>
<td>581</td>
</tr>
<tr>
<td>20</td>
<td>Ukupati</td>
<td>764</td>
<td>07</td>
<td>671</td>
</tr>
</tbody>
</table>

**Field Work Scheme:**

For this research field work system, historical method and functional method is accepted. Morgan is the founder of Field work method. In 19th century Morgan used this method for studying Eurocues community. Field work plan includes the data collection work. The researcher attempts to enter into the actual research field to collect the primary data by observing and intellectually grasping the facts. The researcher collects the realistic data and with these collected data she formulated a new theory.

The specific field work plan is used to get the whole information about the health of Korku tribal. Researcher visited the locations of korku community and interacted with those people to get information of their daily life affairs, customs, rites and traditions in person. Even, the researcher participated in their rites and interviewed them informally and formally. Thus some information is collected through vigilance and observation personally.
**Historical Method:**

While studying tribal community; their history is also important. Historic tribal documentary are not easily available\(^{10}\) who were the ancestors of these tribal? From where did they come and When? We can find answer to all this questions by studying their social history. The age old Korku members are taken as subject to get such historical information about their age old religious rites and customs.

**Functional Method:**

Malinowski and Radcliff-Brown used Functional method for studying various community.\(^{11}\) Society included many factors which affect human life style. Economical, political, religious and social factors are inter-related and they preformed (fulfill) organic, psychic and social needs (requirements). By this method one can get knowledge about how these factors affects on tribal living. Functional method is supported by Field work.\(^ {12}\)

**Fact:**

According to Pauline V. Young, “But facts are not limited to the tangible, thoughts and feelings and sentiments are facts in social science. Facts must be seen as physical, mental or emotional occurrences or phenomena which can be affirmed with certainty and are accepted as true in a given world of discourse”\(^ {13}\) According to Goode and Hatt, “Fact is an empirically verifiable observation”\(^ {14}\)

Definitely known information is called fact. It is essential to draw meaningful conclusion. About the observation and measuring one event bringing about common consent or unanimity is the fact.\(^ {15}\) Data Collection is important in every subject of the research. For arriving at objective conclusions which are subjected to generalize the data plays a vital role. This has been always important. Fact should be experienced, otherwise cannot be accepted as science or in a scientific way. Facts should be more reliable and objective in nature because in the work of research study cause effect of the problem is taken into consideration without these, conclusions cannot be arrived at. It is also difficult to suggest remedies.

**Data Collection Sources:**
Data Collection is very complicated work. Prominently, there are two sources of data collection in social research.

A) Primary Source:

B) Secondary Source:

Both the sources mentioned above are used in the present study.

A) Primary source: Data collected by the researcher personally, over the fieldwork through direct interaction, comes in the category of primary sources. Methods like observation, interview and interview schedule are used to collect primary data.

Data Collection Method: - Sociological research method is a scientific one. Once, the problem of research is set, the proper sample selection method is determined. After determination of proper unit of study, supposing it as central, data is collected from them. For which following three methods of data collection are in vogue.

1) Oral word method – Interview.

2) Written word method- questionnaire, interview schedule, reports, information booklets, Government- documents, letters etc.

3) Wordless method- Observation, experiment.

Following methods are adopted and used at required places.

1) Oral verbal method- Interview: According to C. William Emory Interview means a good conversation through questions and answers with a person or a group of persons related to the subject of study, for data collection required for research work. According to Hader and Lindman, “Interview consists of dialogue or verbal responses between two persons or between several persons” According to M. N. Basu, “An interview can be defined as a meeting of persons face to face on some points.”

For the present study some peoples like health providing staff such as nurses, ward volunteers, ASHAs are selected for discussions about the act of providing health facilities, mental set up of the korku patients, frequency of the diseases that korku are
strike with. Likewise, other problems of korku tribal such as, their backwardness, illiteracy etc are also considered as a subject of interview for collection of required data.

2) Written Word Method- Interview Schedule: Interview schedule is particularly useful during the field observation process of the research work \(^{19}\) is the opinion of M.H. Gopal. Interview schedule is the series of the written questions provided with the multiple choices of answers. In this method, the researcher himself has to fill the answer by asking questions to the respondents. According to C A Mozhaer, it is handled by investigator it can be fairly formal document in which efficiently of file handling rather than attractiveness in the major operative consideration in design attractiveness \(^{20}\) being illiteracy is the main characteristic of tribal community interview schedule is a proper method of data collection in the field work. \(^{21}\)

For the present study different aspects of the research problems are taken into consideration before final preparation of the interview schedule. This interview schedule is prepared in view of the objectives and hypotheses of the research. The series of questions is set in accordance with the general information of the respondents such as their economical, religious and cultural information as well as the information about their cleanliness of their surroundings, diet, availability of pure drinking water, health problems, advantages of government health schemes etc. This series of questions is set to get proper information. The responses included in this set correspond to the real-life situations and the questions in the schedule.

**Pre examination of Interview Schedule:**

Prior to decide finally the interview schedule, twenty Korku tribal was selected to check what type of responses comes out. In this checking, the researcher found that some questions were vague, incomplete, and of duel meaning. While some questions were confusing and an ambiguous, its language was not clear. Thereby, before finalizing the schedule, all the above mentioned shortcoming were removed and thus, the final interview scheduled was printed out and used for further work. The work of data collection of this study is carried out during June 2012 to June 2013.

The primary data collected from korku respondents focused on
1. Personal and family information.

2. Information about cultural and economical status.

3. Information about food habit and physical cleanliness.

4. Information about residential status and cleanliness of surroundings.

5. Information about awareness of health and health scheme.

3) **Non Verbal (Wordless) Method-Observation:** According to P. V. Young – observation means a thoughtful study through eyes which may be helpful for studying of social events, communal affairs. Science begins with observation and must ultimately return to observation for its final validation. Observation is a regulated perception of facts and circumstances with definite purpose in view.

**There are three types of observation:**

1) Participatory Observation

2) Quasi Participatory Observation

3) Non Participatory Observation.

For the research study all method of observation is adopted whenever necessary.

Lindman is given the credit for the use of the word ‘Participatory Observation Method. In his book entitled Social Discovery (1924) he used this word for the first time. Prior to which such method was not in active application. Participatory Observation means to take active participation in the society which is the subject of our study and collect information from them. The researcher has to participate in the selected society as well as visit the location many times so that the researcher may go through the way of observation and has to establish personal relations with the objects, events and persons, their activities. In this way the researcher knows their beliefs, creeds, rites and culture. Thus, the researcher can get required information. In order to know the realistic condition of the people in society the researcher can discuss with the related people. These benefits of the participatory observation method cannot be gained from some other method. In the present study,
the observations of the daily activity of the korku tribal, their natural behavior etc. is carried out through actual participation with the group of these peoples.

B) Secondary source: Regarding the present study, most of the information is obtained through secondary sources. The data which is not collected by researcher but another person or institution already published is known as secondary sources.

For the research work the secondary sources have caused to provide an opportunity to collect very essential data. It is obtained from Integrated Tribal Development Project (ITDP) Dharani, Divisional Tribal Development Office Amravati, likewise the annual report collected from Health officer, Dharani and Chikhaldara, the statistical department, Zilha Parishad Amravati, and from the ICDS office, Amaravati as well as different health booklets, articles from of different newspapers and magazines, journals, similarly a few unpublished PHD thesis and some books are used for the research as secondary source.

Other records in data collection:

While getting information about health problems of the Korku people, researcher has undergone less trouble when the objectives of the research were made clear to the respondents. As the researcher was female, the korku tribeswomen group gave proper and genuine response. During interaction sportive spirit was maintained, similarly in form of village ‘ASHA’ and a bilingual speaker were maintained. Thus, the reliable information has got. All doubts in questionings were cleared.

Generally in the research field the information about a particular element has to be collected through direct contact. The collection of the information from such group is very important thereby the selection of such information supplier group is equally significant. In fact, every member of the society is a referential informant. Many age old people in society know the upheaval in the society very well. The information from such people about their religious customs, magic, culture, and rites is collected and recorded in the separate note-book.

Necessary Documents:

While doing research the documents like map, tables etc are required for study, were collected such as, map of Melghat sub-division, and lists of villages
where Korku tribal are found in majority were part of document collections. The importance of photo-graphs could not be neglected, particularly regarding to tribal field. These photographs helped to make knowledge of the different festivals, ornaments, dresses, life-style and structure of the Korku's houses. It helped a lot to prepare a worthy, reliable report.

**Statistical Scheme:**

According to George A. Ferguson, “Statistics is a branch of scientific methodology. It deals with collection, classification and interpretation of data obtained by the conduct of surveys and experiments. Its essential purpose is to describe and draw inference about the numerical properties of populations.” Statistical method is very important which provides objectivity and accuracy to research. After the completion of the necessary data for the present study; the attention is focused on the interpretation and analysis. On the basis of the successful analysis the ultimate success of the research will depend. Thus the analysis and interpretation of the collected data is done through following stages.

**Edition:**

After collection of data the first step of data processing is editing. In this way, after fillings of interview schedule, information supposed to be unnecessary or improper was deleted judiciously. The part which was vague or incomplete was thoughtfully cleared and completed. Thereby, the presentation of all the collected information became systematic, easy and intelligible.

**Conventionalization:**

To allocate a sign or a word to the pre-determined response as a convention is known as conventionalization. In order to carry out this classification scientifically the process of conventionalization is applied.

**Indexation:**

Indexation is a process of giving each answer or response either number or alphabet as a token or sign. In the present research, the multiple choices are shown with numbers. Indexation is made to ensure appropriate tabulation and classification.
**Classification:**

To have easy and convenient presentation of the data, an apt classification is needed. According to shri Devakinandan Alhans- Figures systematized in respect of its difference and commonality into classes and sections is termed as classification. Due to classifications facts are divided into different groups. Thus, the facts comprising particular group or class can be easily measured. In the present study, the classification of korku community is done in accordance with their age, gender, literacy, vocations etc. as a qualitative base.

**Tabulation:**

According to shri L. R. Konar, tabulation is a systematic and sequential presentation of figures to explain the problem understudy. On the other hand tabulation is a type of measuring unit which transforms the collected data into comparable mode. The essence of the tabulation is to observe the data in pure mathematical terms. The core of tabulation process is to present condition in summarized form through statistical tabulation. In the present study, collected data is divided into different groups. How many facts occur in one group is counted. According to Elhance, “In the broadest sense tabulation is an orderly arrangement of data in columns. It is a process between the collection of data on the one hand and its final analysis on the others” All work of tabulation, classification and conventionalization is done by the researcher personally. Considering the research problem and research objective as base, to know the relations between two units a scheme was planned out. Accordingly tables are formed to find out relations between the elements like education, income, quantity of family members. Tables are made to show cross relationships after tabulation, data is counted statistically, which helped to arrive at conclusions easily.

**Analysis:**

Through field visits, the collected data is compared with the government figures and conclusions are drawn. Sometimes, according to the information collected during research period the problems about health of korku Adivasi and its affecting factors are compared with the developed class of the society. Thus, the analysis is done.
Concepts used for research Study:

Words occurred in the present research study have special meanings. This turns into a particular concept. With the help of concepts a researcher can scientifically prove the final findings of the research. Hence, the explanation of that entire concept is given as follows:

**Health:**

Health is a pre-requisite for human development and is essentially concerned with the well being of common man. Health is a state of dynamic equilibrium between a human body and its environment, while ill health is a state of loss of it. According to World Health Organization, health is physical, psychological, social and spiritual wellbeing of a person, which is universally cherished goal. It has been also defined as state of well being whereby individual’s recognize their abilities or able to cope with their normal stress of life, work productivity and fruitfully make a contribution to their communities. Health is a positive attribute of life and the organization of health services to all people is considered to be the key step towards development.

**Indicators of health status:**

Tribal have various type of geographical area as well as socio-economical culture. Measurement of health status of tribal community is multifaceted problem. Using only one health indicator the measurement of health status of tribal may not be accurate and accurate picture of health scenario. Therefore for this research study varied range of health indicators such as maternal mortality, child mortality, morbidity, malnutrition and health services are consider to measure health status of korku community.

**Maternal Mortality:**

Maternal mortality is one of the main health indicators of health status of society. Maternal mortality represents the economical condition, social status of a
women and health care structure in that society. Maternal mortality is a death of woman related to pregnancy. Every year 5000,000 women around the world die from pregnancy related cause. Maternal mortality is defined as number of death of mother behind the live birth in that year. According to World Health Organization maternal mortality is death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause of related to or aggravated by the pregnancy or its managements but not from any accidental or incidental causes.

Maternal mortality is a death of mother in a pre or post delivery time period. It is a worldwide problem. Though the causes of maternal death are medical but it has strong impact of varied facture like poverty, girl’s education, age at marriage uses of health services. UNICEF found that approximately 80 percent of maternal deaths could be averted if women had access to essential maternity and basic health care services.

Mothers are not only at the center of their families, but they are center to societies. The rate of maternal mortality represents economical educational and social condition of a woman and in particular health status of society. The death of mother has profound consequences for the social and economic health and development of a family and a nation.

**Child Mortality:**

Child mortality is one of the health indicators of society. Child mortality is composed infant mortality and number of death of children in between one year to five years age. Infant mortality has three forms depending on the age of child at death.

1) **Neonatal mortality:**- deaths of newborn babies during first one month (0 to 28 days) after births.

2) **Post neonatal child mortality:** - deaths of infants of the age one month to one year.
3) **Prenatal mortality:** - Number of death of a late fetal death (22 weeks gestation to birth), or death of a newborn up to one week postpartum.

4) **Under five child mortality:** - Number of deaths of children between the age of one year to five year in that year.

Child and infant mortality rates are higher among the scheduled tribes\(^39\). It was observed by many researches that cholera, malaria, phenomena, dhyaria are the major killer disease for children under five years. Malnutrition is associated with more than half of all deaths of children worldwide.\(^40\)

**Morbidity rate:**

The word morbidus is Latin word having meaning sick or unhealthy or being ill by any cause. The term Morbidity is used to the existence of any form of illness or to the degree of disease that health conditions affect. Morbidity rate is the number of individuals with sickness or unhealthy health condition during a given time. Morbidity rate refers to the frequency with which a disease appears in population. Many researchers found that morbidity is directly linked with socio-economic and demographic characteristics like occupation, income, housing, sanitation, hygiene, food pattern, drinking water etc.

For this study the term morbidity is based on self reporting and not a clinical examination therefore estimates of morbidity in referenced period is not strictly follow recommendation of WHO committee expert.

However “morbidity, a state of ill health, has been increasingly recognized as a measurable indicator of health and well-being and also consider with a potential for replacing mortality rates as indices of social and personal well-being.\(^41\)

**Malnutrition:**

Each and every individual requires a minimum amount of food to keep him healthy. When this particular food requirement is not fulfilled, the human body becomes weak and reduces its resistance power leading into malnutrition.
Malnutrition prone the body into many diseases like fever, diarrhea, vomiting, measles etc. Every level of malnutrition increases the risk of dying. Malnutrition hurts children in their ability to learn, ability to develop and ability to resist serious diseases. Malnourished children are likely to grow in to malnourished adults who faces heightened risks of disease and death. W.H.O. defines malnutrition as a stage of body with excessive or insufficient one or more essential food nutrients. The term malnutrition scientifically encompasses both over nutrition and under nutrition. Over nutrition is due to excess and imbalanced diet, while under nutrition caused by lack of sufficient nutritious food. According to Amit Thorat child related under nutrition is remarkably high among tribal communities in India.

Malnutrition is a serious condition that occurs when a person’s diet does not contain the right amount of nutrients. Every individual requires proper quantity of nutritious food to maintain his physical and overall growth and development. When these needs are not fulfilled, the symptoms are seen on growth and general activities and fitness of body. Body becomes weak. Muscles become weak and lethargic feeling occupies the malnourished person. Powers of immunity decreases and as such there is increase in illness and infections. Malnutrition happens in two ways, first due to over nutrition and second due to under nutrition.

1) Over Nutrition:

Over nutrition happens when intake of food is more than actually required. Such kind of nutrition is seen developed or economically settled people. This over nutrition results in fatness, heart diseases, diabetes, high blood pressure and other psychological ailments.

2) Under Nutrition:

Under Nutrition is occurred when the body does not get the required nutritional contents. It is more seen malnutrition. Due to lack of nutritious contents, diseases like beriberi, night blindness etc are occurred. Jiilfi defined malnutrition as a degenerated state which involves either deficiency or complete lack of essential food nutrients which result in malnutrition. Symptoms of lack of one or more nutrients for a longer period are seen on body is called malnutrition. Generally person requires food of 2500 to 3000 calories. Nutritional contents in diet provide necessary
energy required for physical and mental activities. Balanced diet is required for the fitness and it could create strong immune system of the body. According to the parameters drawn by Medical Council, “women in general require diet which could give 2200 to 2500 calories; while pregnant women require diet which could give 2800 to 3200 calories. Hard working people required 3600 to 4000 calories while young adolescents require 3000 calories.” If proper diet is not given in proper age, there are chances of malnutrition.

**Symptoms of Malnutrition:**

Symptoms are seen on body due to lack of intake of nutritious food. If these signs or symptoms are diagnosed at the right time, further weakening impact of malnutrition could be avoided. FAQ and WHO Committee have ascertained symptoms of malnutrition. In children general symptoms of restlessness, fatigue, tiredness, weakness in physical movements, wrinkles on skin, paleness, increased size of stomach and skinny hands and legs, less weight, dryness in eyes (xerosis), gum bleeding etc. are generally seen.

### Table No. 3.3

**Primary physical symptoms seen due to lack of supply of nutritional contents**

<table>
<thead>
<tr>
<th>Part of the body</th>
<th>Symptoms</th>
<th>Deficiencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hair</td>
<td>Dry and splitting of hair, hair loss, change in colour</td>
<td>Vitamin C, Iron, Proteins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vitamin D, Zinc, A,B,C, Iron, B&lt;sub&gt;12&lt;/sub&gt;, Fatty Acids, Raiboflobin</td>
</tr>
<tr>
<td>Nails Skin</td>
<td>White spots on nails, brittle nails, spooning on nails</td>
<td></td>
</tr>
<tr>
<td>Eyes</td>
<td>Skin itching ,Pale face, rashes on skin,</td>
<td>Vitamin A,</td>
</tr>
<tr>
<td>Mouth</td>
<td>hyper pigmentation, dry skin</td>
<td>Raiboflobin</td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Nose</td>
<td>Itching of eyes, photophobia, xerosis, retinal field defect Burning sensation of tongue, chelosis, bleeding of gums, angular stomatitis, loss on enamel on teeth, loss of tasting ability</td>
<td>Payridoxin, Zinc, Vitamin B, B₃, iron, calcium, Niyasin, B₂ Vitamin B</td>
</tr>
<tr>
<td>Throat</td>
<td>Loss of smelling ability</td>
<td>Iodine</td>
</tr>
<tr>
<td>Muscles and</td>
<td>Goiter</td>
<td>Vitamin A,D,C,B, proteins, Folet, B,B₂, B₂,E, Calcium, iodine, Magnesium</td>
</tr>
<tr>
<td>Bones</td>
<td>Muscle pain, swellings, dryness, swelling on ankles, rheumo arthritis</td>
<td></td>
</tr>
</tbody>
</table>

Source: Nutritional Science, by B. Shrilaxmi, revised second edition. 1999

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**Parameters for Malnutrition**

Generally following parameters of Malnutrition are accepted world over.

1) Height related to Age- Height of an individual is generally related to the heredity. Similarly, the impact of other factors in the surrounding environment and lack or supply of nutritious food also affects the height. Generally 50 cm height at the time of birth is taken as standard height. Increase in height corollary with the age is regarded as ideal growth. Annually healthy person’s height increases by 2 cm till certain age.

<table>
<thead>
<tr>
<th>Period</th>
<th>weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth</td>
<td>50 cm</td>
</tr>
</tbody>
</table>
2) Weight related to Age- Weight is widely used as one of the main parameters to access the children’s malnutrition during (5 years). Generally child born with less than 2.5 kg is regarded as malnourished. Increase in weight is generally regarded as the sign of physical growth of children. If child does not receive enough nutritious diets during his growing age, it cast impact on the weight of his body. His weight remains less than average. If the weight is not as per age or rapidly decreasing weight is a sign of malnutrition.

<table>
<thead>
<tr>
<th>Period</th>
<th>Expected weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth</td>
<td>2.5kg to 3 kg</td>
</tr>
<tr>
<td>3-12 month</td>
<td>Age (Month) 9</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>1-6 years</td>
<td>Age (years)x 2+8</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

In a natural process, infant of 2 to 3 kg weight can increase 20 times during the period of 20 years to become a youth of 50 to 60 kg weight. This increase in weight is possible when the baby gets air, water and food in required quantity. Weight has a co-relation with the health of an individual.

Health remains fit due to nutritious diet. It results in proper physical growth. Nutritious diet, Health and growth constitute cycle of individual growth. If any drawback comes within the cycle, crises of malnutrition can leap into the growth cycle of human body.

3) Weight for Height- wasting is used as a way to identify severe and acute malnutrition. (UNICEF). Severe and acute malnutrition is defined by very low weight for height.

Grade of Malnutrition
Grade of malnutrition is adjudged on the general or expected weight of children (0-6 years) as against the actual weight of a child. Soon after the birth, children with less than the expected weight i.e. 2.5kg are classified into different grades according to their less weight.

Grade 1 = 70 to 80 percent weight of the expected weight
Grade 2 = 61 to 70 percent weight of the expected weight
Grade 3 = 51 to 60 percent weight of the expected weight
Grade 4 = less than 50 percent weight of the expected weight.

According to the health standards setup by World Health Organization from year 2010-11, malnourished children are classified as Normal, Moderate Active Malnutrition (MAM), Severe Acute Malnutrition (SAM) instead of earlier grade 1, grade 2, grade 3 and grade 4 classification of malnourished children.  

The basic indicators of malnutrition are height and weight which should be proportionate to the age. For this study the term malnutrition is applied to under nutrition malnutrition.

**Health Services:**

The fundamental WHO goals of ‘Health for All’ means that people everywhere, throughout their lives, have the opportunity to reach and maintain the height attainable of health. To measure out health status of any country or community, availability of health services is one of the most important health indicators. The term health services imply organization delivery staffing, regulatory and quality control. It includes availability of Primary health centers, Medical officers, Moving Health Squads etc. for specific population. As per the governments norms, for tribal area there must be one Rural Hospital for 2,00000 population, one Primary Health Center for 20,000 population, one Primary sub center for 3,000 population, one doctor for 6,000 population, one auxiliary nurse for 2,000 population.

**Obstacles in the data collection for research study:**

While doing research, the researcher had to face some difficulties as the korku Adivasi were shy by nature, they hesitated sometimes to interact with the
lady researcher, particularly when she is one of the elite class. In these circumstances the village- woman working as ‘ASHAs’ are asked for assistance. This caused consummation of time as waste.

The researcher was not well in their Korku language, hence the assistance of bilingual, or some teachers long working in this area were relied on for to get required information. Thus, sometimes language acted as obstacle.

Most of the Korku in the Melghat region live under poverty. To earn their bread and butter they had to remain in their farms the whole day work as a waged labourer. In the evening, after the day-long toil in the field, they were found tired and unwilling to answer the researcher’s queries and question. They were less interested, which increased the frequency of visits to the same place which was indeed tiresome, waste of time, money and energy.

Korku community being illiterate and backward comparatively to other tribal community of this region, they felt doubted when they saw the researcher, hence, she got common and identical responses for most of the questions.

The habit of wine drinking is socially sanctioned in this community. As researcher is womankind, she had to take support of the trustworthy male to contact tribesmen respondent of this Korku group. Even the Korku tribeswomen were also found addicted to drinking, hence such women counter reacted towards the researcher asking whether she had come to take police action against them. Such fear among them stopped them to answer the questions and tried to avoid. In this situation, the researcher treated them very patiently to acquire necessary information.

The Korku’s villages are located at 5 to 10 K.M. of distance from each other. Even transport facility is not proper in this area. There are very less tar constructed roads. Hence, the researcher had to walk on foot for some time to reach their remote locations. This caused physical trouble.

In order to collect, reports, tables showing population, maps, the researcher faced difficulties, because, the government employees prevaricate to answers occasionally, while some tried to avoid by giving information orally. In this situation the researcher acted wisely and turned their attention towards the objectives and genuineness of the research. Thus she got required data ultimately.
Thus, it is found that, the government health department officer had provided as much reliable information over the expenditure on the health of tribal community as well as the facilities regarding their health.

In short, in spite of the above mentioned limitations and difficulties in the research work the researcher has tried her best to reach at the root of the problem keeping in view the objectives of the research with the help of available data and statistical figures, the researcher added most of the clarity, correctness to the research. She used the logical base to analyze the fact. She focused on the reliability and validity of the interview schedule. She maintained stress free atmosphere for the respondents particularly to get the genuine, honest opinion.

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