CHAPTER – 3

METHODOLOGY

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. The various steps adopted by the researcher in studying the research problem along with the logic behind them is thoroughly elaborated. It is necessary for a researcher to know about the uses of different methods and tools, measurements as well as the methodology used behind these, and clearly understand the applicability. "Thus, research methodology do not only comprise of the research methods but also consider the logic behind the methods used in the context of not only the study but also explain why a particular method or technique is used and why the others are not being used so that research results are capable of being evaluated either by researcher himself or by others" (Kothari and Garg, 2014).

The methodology adopted in carrying out the present research is elaborated under the following heads-

3.1 Research design
3.2 Locale of the study
3.3 Sampling procedure
3.4 Variables of the study
3.5 Phase wise plan
3.6 Conceptual model of the study
3.7 Factorial design
3.8 Methods of data collection
3.9 Processing of data
3.10 Statistical analysis

3.1 RESEARCH DESIGN The research design is the arrangement of conditions for collection and the analysis of data in a manner that aims to combine relevance to the research purpose with in procedure. In fact the research design is the conceptual structure

with in which research is conducted. It constitutes the blue print for the collection, measurement and analysis of data. Research design is a master plan specifying the methods and procedures guiding research (Kothari & Garg 2014).

The present study was conducted by using cross sectional research design. Cross sectional research deals in study of different groups of people who differ in the variable of interest but share other characteristics, such as socioeconomic status, background and ethnicity. Cross-sectional research studies are based on observations that take place in different groups at one time. The present study entitled **"Assessment of Physical and Psychological wellbeing of workers in unorganized sector",** was carried out among the Construction workers, Brick kiln workers, Ornamental workers, Sanitary workers and Chikankari workers at a single time period, as all the workers were sharing common characteristic that they belong to unorganized sector and background.

3.2 LOCALE OF THE STUDY

The present study was carried out at Lucknow city, Uttar Pradesh, India. Lucknow city is the state capital of Uttar Pradesh and famous for its Chikankari work around the whole country as well as World, other than it being a capital city of a state, it attracts a lot of industrial and infrastructural development. The infrastructural development of the city offers lot of job opportunities to the people in different sectors like labour for construction industry, Brick kilns etc. Hence, the researcher felt, Lucknow district, appropriate for conducting the research.

3.3 SAMPLING PROCEDURE

The process of selecting a sample of appropriate size from the target population is termed as the sampling method.

Sample Selection- Multistage random sampling technique was adopted to select the sample for the present study, different stages adopted for the research are as discussed below-

Stage 1-The municipal corporation of Lucknow was approached and list of wards and areas existing in Lucknow was obtained.

Stage 2- Out of the existing six Zones, fifth and sixth zone were selected randomly by using simple random sampling.

Table No.3.1 List of wards of the fifth Zone in Lucknow district-

Zone-5			
S.No.	**Wards**	**S.No.**	**Wards**
1-	Kharika Ward	**10-**	Ram JiLal Ward
2-	Sarojani Nagar Ward I	**11-**	GeetaPalli
3-	**Raja BijiliPasi Ward**	**12-**	VidyaWati Ward I
4-	Ibrahim Pur Ward	**13-**	Om Nagar Ward
5-	Sarojani Nagar Ward II	**14-**	VidyaWati Ward
6-	Hind NagarWard	**15-**	ChitraGupt Nagar Ward
7-	**Sarda Nagar Ward**	**16-**	Gurunanak Nagar Ward
8-	KasariKhera Ward	**17-**	**Jankipuram Ward**
9-	Guru Govind Singh Ward		

Table No.3.2 List of wards of the Sixth Zone in Lucknow district -

Zone-6			
S.No.	**Wards**	**S.No.**	**Wards**
1-	Gadi Peer Kha Ward	**11**	Kanhaiya Madhavpur Ward
2-	Sahadat Ganj Ward	**12-**	Mallahi Tola Ward I
3-	Acharya Narendra Dev Ward	**13-**	Sheetla Devi Ward
4-	Asharfabad Ward	**14-**	Alam Nagar Ward
5-	Bhawani Ganj Ward	**15-**	Haidar Ganj Ward II
6-	Kashmiri Mohlla Ward	**16-**	Haidar Ganj Ward I
7-	Kalbey Abeed Ward II	**17-**	Ambar Ganj Ward
8-	Husainabad Ward	**18-**	Chowk Ward
9	**Mallahi Tola Ward**	**19**	**Bala Ganj Ward**
10	Daulat Ganj Ward	**20**	Kalbey Abeed Ward I

Stage-3- From among the wards existing in fifth zone, Raja BijiliPasi Ward, Sarda Nagar Ward were selected and from sixth zone, Balagang, Mallahi Tola, Jankipuram Ward IST were selected by using simple random sampling technique.

Table No. 3.3 List of Mohallas in Raja BijliPasi Ward-

Raja BijliPasi Ward	**S.No.**	**Mohallas**	**S.No.**	**Mohallas**
	1-	**Ashiaana M**	**12-**	Kila Mohammadi Nagar
	2-	**Ashiaana N**	**13-**	Gudora
	3-	Ashiaana M-1	**14-**	Bagli
	4-	Ashiaana N-1	**15-**	Aurangabad Jageer
	5-	**LDA colony sector F-Extention**	**16-**	**Aurangabad Khalsa**
	6-	Rahimabad	**17-**	Mirjapur
	7-	New Rahimabad	**18-**	Chuwara Kheda
	8-	Behsa	**19-**	Swaroop Chandra Khera
	9-	Munshi Khera	**20-**	Birhana Kheda
	10-	T.P. Nagar	**21-**	Khwazapur
	11-	Kila gaon		

Table No. 3.4 List of Mohallas in the Sharda Nagar Ward I-

Sharda Nagar Ward	**S.No.**	**Mohallas**	**S.No.**	**Mohallas**
	1-	**Bijnour**	**7-**	Devi Kheda
	2-	Bangla Bazar	**8-**	GurabKheda
	3-	PhirangiKheda	**9-**	Sale Nagar
	4-	Usari	**10-**	SarpotGanj
	5-	SheetlaKheda	**11-**	Piproulee
	6-	**Raibareli Road Yojna**	**12-**	Sharda Nagar

Table No. 3.5 List of Mohallas in the Bala Ganj Ward -

BALA GANJ WARD	**S.No.**	**Mohallas**	**S.No.**	**Mohallas**
	1-	Bala Ganj	**9-**	Hari Nagar
	2-	Bari Road	**10-**	Peer Nagar
	3-	Sarfaraj Ganj	**11.**	Chhandoiya Ka Purwa
	4-	Mala Puram	**12-**	**Barawan Kala**
	5-	Railway colony	**13-**	**Dubagga**
	6-	Gopal Nagar	**14-**	Bari Kala
	7-	Rastogi Nagar	**15-**	Chuddaya
	8-	Goushala Road		

Table No. 3.6 List of Mohallas in the Mallahi Tola Ward –

Mallahi Tola Ward	**S.No.**	**Mohallas**	**S.No.**	**Mohallas**
	1-	Baraf Kahana	**4-**	Mufti Ganj
	2-	Jahkaadh Khana	**5-**	Hata Mirza Ali Kha
	3-	Musaheeb Ganj	**6-**	**Hussaina Bad Trust Road**

Table No. 3.7 List of Mohallas in the Jankipuram Ward IST-

Jankipuram Ward IST	**S.No.**	**Mohallas**	**S.No.**	**Mohallas**
	1-	Engineering College Allover	**9-**	Radhey Shyam Purwa
	2-	Akansha Parisar Pocket A & B Whole	**10-**	University New Campus
	3-	Rani Khedha	**11.**	Sultanpur Gaon & Society Near Gaon
	4-	Khaleelabad Nevada Gaon	**12-**	Sitapur Road, Abhishek Puram & Other
	5-	Sector- I Whole	**13-**	**Maniyao Gaon**
	6-	Rampur Nishp Gaon	**14-**	Chowdhari Purwa
	7-	Janki Bihar, Other Society and Madiyav	**15-**	Gaderian Ka Purva
	8-	Shiv Bihar, Aleesh Nagar		

Stage -4 Selection of Mohallas- From each ward, mohallas were selected purposively. From Raja BijliPasi Ward four mohallas (Ashiyana M, Ashiyana N, LDA colony sec. F extension, Aurangabad Khalsa), from Sarda Nagar Ward, two Mohallas (Bijnour and Raibareli road yojna), From Balaganj Ward, two Mohallas (Barawan kala and Dubagga) and one Mohalla each from Mallahi Tola Ward (Hussainabad Trust Road), and Jankipuram Ward IST, (Maniyao Gaon), were purposively selected because all these mohallas covers the sufficient number of construction, Brick kilns sites, Institutions, chikankari centres and ornamental workshops the identified sectors from which the sample has to be drawn and studied.

Stage -5- Selection of sector-

Workers belonging to five sectors were involved as sample for present research, where in workers belonging to three sectors (Construction, Sanitary and Brick kiln workers) were identified based on the literature review, where in researchers reported acute stress among them. The other two sectors (Chikankari and Ornamental workers) are very popular industries of Lucknow and maximum number of workers are involved in these industries, hence workers working in these two sectors also were selected as sample.

A."Selection of Construction Workers- From the review, it is very clear that majority of the workers are involved in construction industry and Lucknow being state capital, many construction projects are under progress in and around the whole district. From the selected Mohallas of Raja Bijli pasi ward, workers engaged in different construction projects running in the area of Ashiyana, BBAU campus, Aurangabad were purposively selected, the workers engaged at the selected sites were selected randomly for the present study.

Fig. No. 3.1 Construction workers in site

B."Selection of Sanitary Workers- Most of the government as well as private organizations let in subcontract of cleaning work of their organization to various contractors where in many of the workers were engaged. Three work places, comprising of one educational institute, one hospital and one mall were selected purposively so that the impact of the work place on their stress can also be studied. BBAU campus, Lokbandhu hospital, Phoenix shopping mall, different streets of Ashiyana Sector M were purposively identified where large number of sanitary workers are engaged in sanitation work. The workers were randomly selected by visiting all the selected places.

Fig. No. 3.2 Sanitary workers working in their respective work place

C."Selection of Brick Kiln Workers - Construction industry is growing fast, Bricks are the basis of any construction. The production of bricks also gives employment to large number of workers in unorganized sector. Vast literature is available on brick labours, the production sites of raw bricks at Kanpur road, Mohan Road, Hardoi road were identified with the help of brick field owners, the brick kilns site located at Barawan Kala and Dubbaga, Hardoi road Lucknow, were purposively selected for the present study, the respondents were selected randomly at working sites .

Fig. No. 3.3 Brick kiln workers working in kilns

Chikankari industry and ornament making are very popular industries of Lucknow, and maximum number of workers are involved in these industries hence workers working in these two sectors were also selected as sample.

D."<u>Selection of Chikankari Workers-</u> As Lucknow is famous and known for chikankari industry, where in majority of the workers are involved, with the help of local traders of chikankari, Hussainabad trust road, Aurngabad Khalsa, Bijnor mohallas were identified where chikankari work units are located. Out of these mohallas, the workers of chikankari from Aurangabad and Bijnor were randomly selected for the purpose of data collection for the present study.

Fig. No. 3.4 Chikankari workers from various workshops

E." Selection of Ornamental Workers- Ornament making is another industry which offers employment to the skilled workers, the workers employed in this industry uses different types of tools, and machinery, which demands a high ergonomic intervention, in their work stations and tools, in order to reduce different disorders in their health. With the help of local traders of ornament articles, Hussainabad trust road near Bara Imambara and Madiyava, were identified as the places where majority of the ornament making workshops are located, and both the areas were selected using random sampling technique for the present study.

Fig. No. 3.5 Ornamental workers working

Determination of Sample size – The sample size for the present study was computed using the given formula- $\mathbf{N = Z^2p.q/E^2}$

where N = Sample Size

Z = 95% confidence level = 1.96

p = prevalence = 80

q = (1-P) = 20

E = permissible error = 8

$N = (1.96)^2 \times (80x20)/64 = 100$

It is evident that a sample of 100 workers from each sector has to be identified and hence 100 workers with an equal distribution of male and female respondents from each sector was taken. The present study was conducted including 5 different sectors, therefore the appropriate sample size for the study was 500. The present study includes a total 500 respondents, 100 respondents (50 male and 50 female) from construction, brick kilns, sanitary and ornamental sectors. The sample of Chikankari workers comprised of all female workers (N = 100) as chikankari work is mostly done by women.

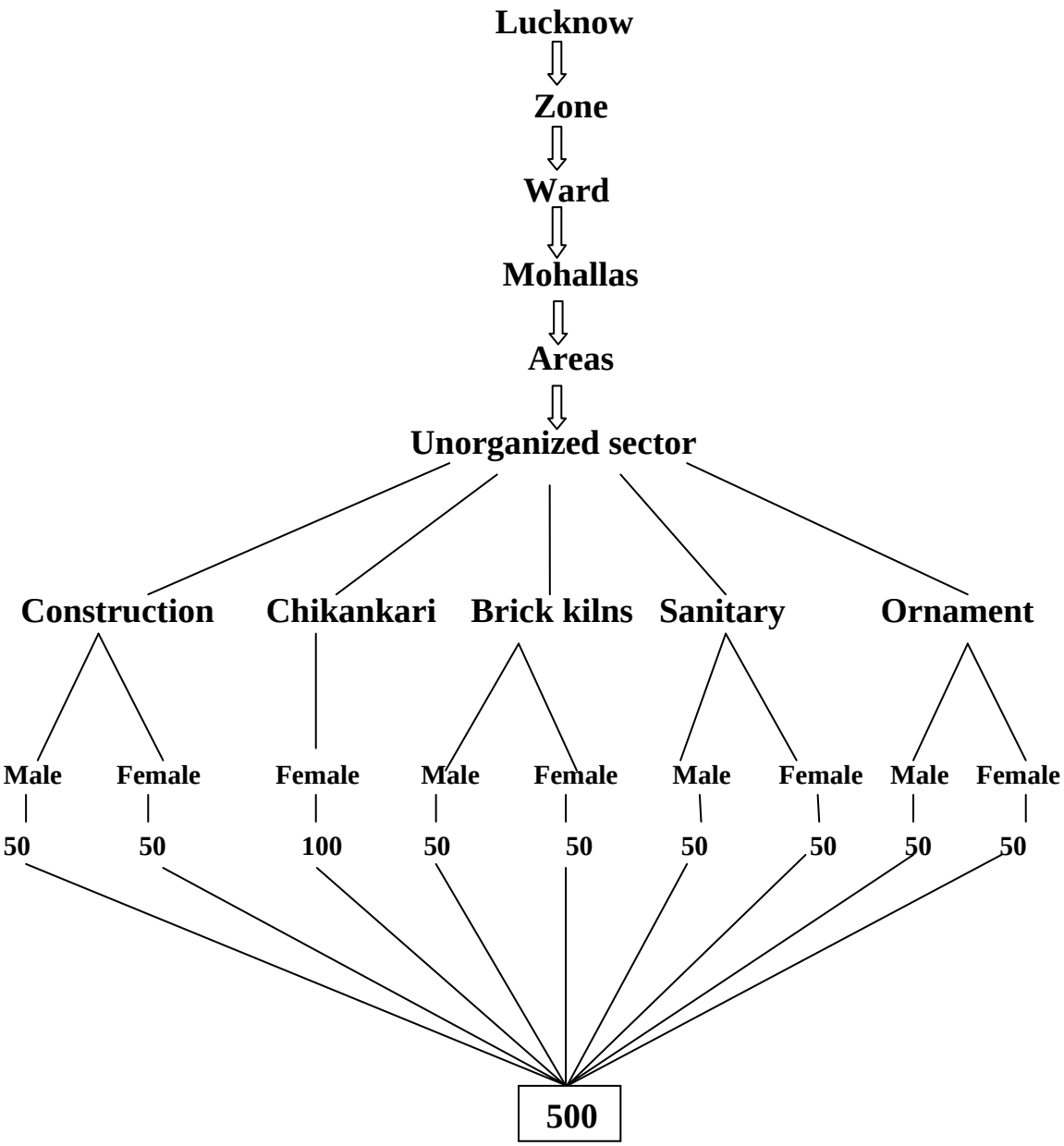

Fig. No. 3.6 Sampling Design

3.4 VARIABLES OF THE STUDY & OPERATIONAL DEFINITIONS

A concept which can take on different quantitative values is called a variable. As such the concepts like height, income are all examples of variables. Qualitative phenomena (attributes) are also quantified on the basis of the presence or absence of the concerning attributes. The variables were selected according to the objectives of the study. The selected variables were categorized into two categories namely independent variables and dependent variables. The present study was conducted to study the relationship between identified independent and dependent variables.

3.4.1 Independent variables-Independent variables are those variables which are varied in nature and will effect other dependent variables, like age, income, where researcher has no control over these variables. The independent variables considered in the present study were categorised into personal variables and situational variables. These variables are measured with different measurement scale as discussed below-

3.4.1.1 Personal variables:-

(A) Variables measured in Nominal scale and coded as -

a)" Gender	**Code**	**Marital status**	**Code**
Male	1	Married	1
Female	2	Unmarried	2

b)" Type of family:-Based on living arrangements each family was divided in to groups-

a)" Nuclear family- includes husband, wife and their unmarried children living together.

b)" Joint family-includes all the parental members along with their family members, living together.

Family	**Scoring**
Nuclear	1
Joint	2

(B) Categorical & Scale data

a)" Age:-Computed years of age at the time of study were considered as age of the respondents. It was assumed that the age of the sample workers may influence the efficiency of the workers. The age of the respondent was recorded directly and it was re-coded in to different groups whenever it is required as per the requirement of statistical tools.

b)" Education:-This refers to the level of systematic and formal education which the respondents achieved in a school/institution. Educated persons are prone to change and easily grasp the messages. They are likely to comprehend more and retain more knowledge as compared to an illiterate person, hence educational status of the respondent was also taken as one of the variables.

Education	Scoring
Graduation	6
Intermediate	5
High school	4
Junior	3
Primary	2
Illiterate	1

c)" Family Size:- The number of the dependent and independent persons in a family depends upon the type of family, in case of joint family married and unmarried persons are included where as in case of nuclear family it is only the number of dependents. The data was recorded as categorical data in to different category as below 4, 4to 6, 6 and above.

d)" Income per month: - It refers to total income in rupees earned by the respondents from all sources in a particular month. The income is recorded as scale data which was converted in to categorical data as per requirement during analysis.

3.4.1.2 Situational variables:-

a)" Type of occupation – It refers to the activity an individual perform in order to generate the income on a regular bases and put his/her effort to perform the job assigned or pursue. The study has been conducted on the workers of unorganized sector- construction worker, sanitary workers, brick kilns workers, chikankari workers and ornamental workers.

b)" Work experience- Work experience in the present study is the duration of experience in number of years i.e the workers engaged in the present work. The data was recorded in discrete scale.

c)" Working hours per day-Term used to designate the number of hours which an employee is under an obligation to work.

d)" Working day- Number of days a worker works in a week.

e)" Number of Breaks in a day- The number of breaks, a worker can take during his/her working hours.

All of the situational variables are measured in interval scale, only the work performed was recorded in nominal scale.

3.4.2. Dependent Variables:-A dependent variable is what you measure in the experiment and what is affected during the experiment. The dependent variable responds to the independent variable. It is called dependent because it "depends" on the independent variable. In a scientific experiment, you cannot have a dependent variable without an independent variable.

“Physical and psychological well being” were taken as the dependent variables and other variables like age, income gender, sectors were independent variables for the study.

3.5 PHASE WISE PLAN OF WORK

The present research was carried out in the following phases-

Phase-I- In the first phase, a pilot study was conducted to finalize the process of study and identify the problems in conducting the study so that the real measurement process can be carried out smoothly.

Phase-II- In the second phase, the measurement scales for the study has been finalized-

(i)" Socio-economic status (SES) scale developed by Bharadwaj (2005).

(ii)" Psychological wellbeing scale developed by Sisodia & Choudhary (2005).

(iii)" Physical well being scale developed by Srivastava (1976) and Body Discomfort Scale developed by Kuorinka (1987).

Phase-III- In this third phase the sampling method was finalized in order to select the sample for the purpose of data collection further the working sites of the workers of five unorganized sectors i.e. Construction work, Sanitary work, Chikankari work, and Brick kiln works were identified in different areas of the city.

Phase-IV- In the fourth phase for the purpose of data collection regarding the socioeconomic status, physical well being, psychological well being, the interview of the workers working at different selected sites was carried out by the researcher.

Phase-V - In this last phase the collected data was analysed by using various statistical tools, fit in proper construction table and summary and conclusion was drawn.

3.6. CONCEPTUAL MODEL OF THE STUDY

The conceptual framework of the study represents the relationship of the variables with respect to the formulated objectives of the study. It is conceptualised that demographic variables i.e., age, education, type of family, family background, family income, caste, religion, and situational variable working hours, experience, number of breaks, working day, type of activity, influence the physical and psychological well being. Workers in unorganized sector are physically extremely strained and the personal and situational variables influence their wellbeing. Hence, the present study is conceptualised to determine the influence of these variables to enhance the physical and psychological wellbeing of workers.

CONCEPTUAL MODEL OF THE STUDY

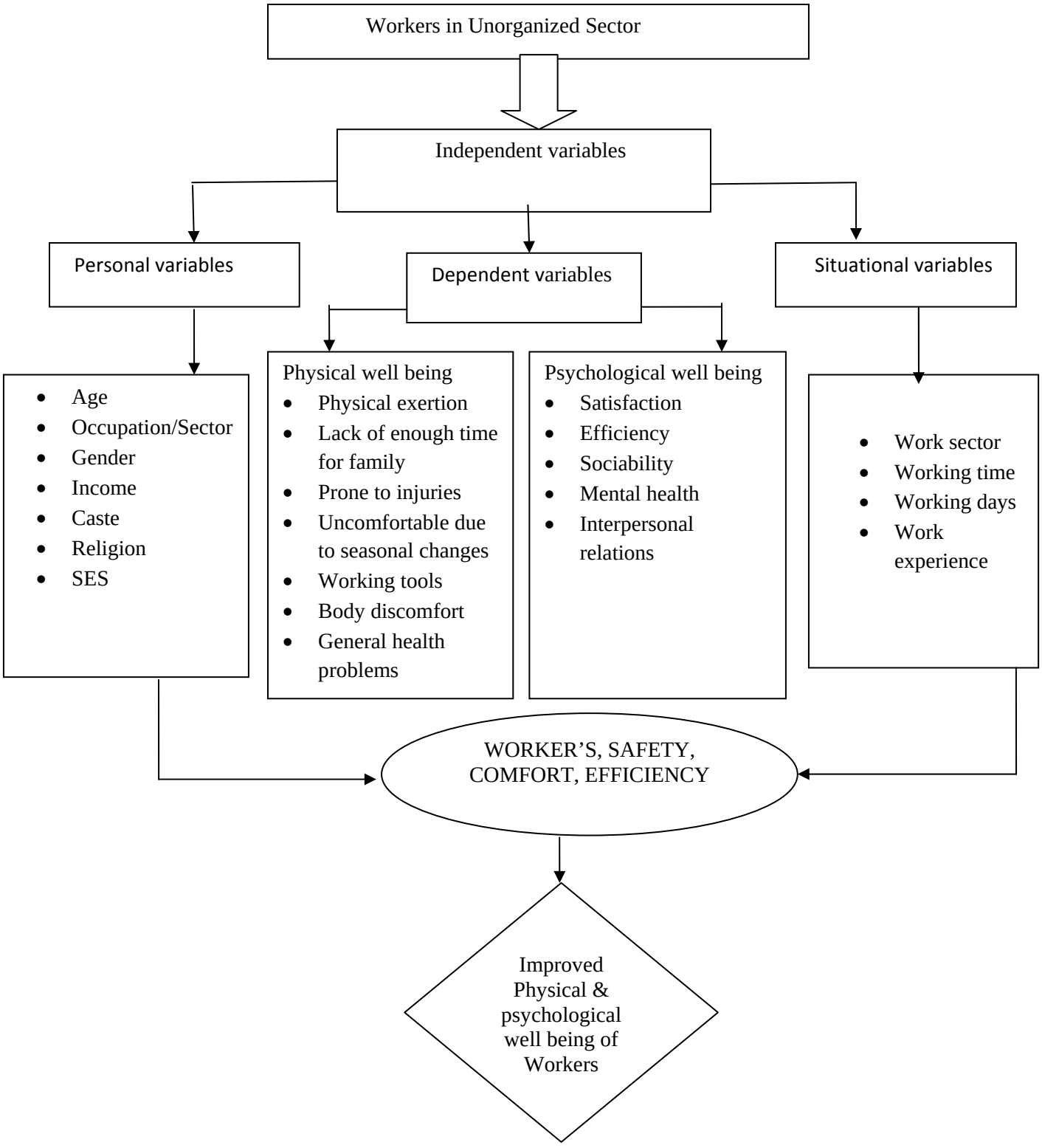

Fig. No. 3.7 Conceptual model of the study

3.7 FACTORIAL DESIGN

5x3x2 factorial design was employed to study the physical and Psychological wellbeing across socio- economic status and gender.

A															
B1			B2			B3			B4			B5			
C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	
D1 D2	D1 D2	D1 D2	D1 D2	D1D2	D1 D2	D1 D2	D1D2	D1 D2	D1 D2	D1D2	D1D2	D1D2	D1D2	D1D2	
PW, PSW, GHP, BD															

Where

A = Workers in unorganized sector

B = Working sector

- B1 = Construction workers
- B2 = Sanitary workers
- B3 = Chikankari workers
- B4 = Ornaments workers
- B5 = Brick kiln workers

C = Socio-economic status

- C1 = Higher socio-economic status
- C2 = Middle socio-economic status
- C3 = Lower socio-economic status

D = Gender

- D1 = Male
- D2 = Female

PW = Physical Wellbeing

PSW = Psychological Wellbeing

GHP = General Health Problem

BD = Body Discomfort

3.8 METHODS OF DATA COLLECTION

3.8.1 Data collection Techniques and Tools

For the present study, the data was collected through adopting interview technique, the respondents were interviewed personally at their working places.

The physical wellbeing, psychological wellbeing and socioeconomic status of the selected respondents were assessed using the following scales-

1-" **Socio-economic Scale (SES):-** SES scale developed and standardised by Bharadwaj, 2005 was used to assess the Socio Economic Status of the respondents.

2-" **Psychological Well Being Scale (PSW):-** Psychological well being of the respondents was assessed using Psychological Wellbeing Scale developed by Sisodia & Choudhary, 2005.

3-" **Physical well being Scale (PW):-** The Physical wellbeing was measured through assessing Occupational Stress and Body Discomfort.

a)" Occupational stress was assessed using modified version of Occupational Stress Scale developed by Srivastava, 1976.

b)" Body discomfort was measured using the Body Discomfort Scale, developed by Kuornika et al., 1987.

3.8.2 Socio-economic Status- The 'Socio-economic Status is obviously a blending of the two status as enumerated earlier. Though none of the two can exist without each other yet they are distinctively different. 'Socio-economic Status' appears to be the resultant of the position of an individual in a society by virtue of a complex fusion of both of them, which often do not run parallel to each other in their own areas. This intermingling takes place in an undefined and curious manner eventually to present an indicator to 'Socio-economic Status'.

'Socio-economic Status' would, therefore, is a ranking of an individual by the society he/she lives in terms of his material belongings and cultural possessions along with the degree of respect, power and influence. The present study adopted the Socio Economic Status scale developed by Bharadwaj (2005), National Psychological Corporation Agra, India.

Reliability

The reliability of the revised scale has been calculated by using test and retest method. The following reliability coefficient correlations were found in seven and of the scale as a whole coefficient of correlation 0.76.

Validity

The content validity of the revised scale, since areas and then item are solely based on research proven items is high and promising.

Interpretation

Interpretation of any status or all the nine types of status can be made with the help of T-scores. Categories of any status can be ascertained with the help of table given as follows:-

Sr. No.	Category	Range of Scores
1.	Upper class	70 and above
2.	Upper middle class	60 - 69
3.	Middle class	40 - 59
4.	Upper lower class	30 – 39
5.	Lower class	29 and below

3.8.3 Psychological well being scale- The study adopted the scale of psychological well being developed by Sisodia & Choudhary (2005), National Psychological Corporation, Agra, India. Scale was prepared comprising of 50 statements with a view to measure several aspects of well being like Satisfaction, Efficiency, Sociability, Mental health, and Interpersonal relations.

Life Satisfaction- The act of satisfying, or the state of being satisfied, gratification of desire; contentment in possession and enjoyment; repose of mind resulting from compliance with its desires or demands.

Efficiency- The comparison of what is actually produced or performed with what can be achieved with the same consumption of resources (money, time. labour, etc). The quality of being efficient or producing an effect or effects; efficient power; effectual agency.

Sociability- The relative tendency or disposition to be sociable or associate with one's fellows. The quality or state of being sociable; also, the act or an instance of being sociable.

Mental health- Mental health is a term used to describe either a level of cognitive or emotional wellbeing or an absence of a mental disorder. Good mental health is a state of well- being in which a person is able to cope with everyday events, think clearly, be responsible, meet challenges, and have good relationships with others.

Interpersonal relations- An interpersonal relationship is an association between two or more people that may range from fleeting to enduring. This association may be based on limerence, love and liking, regular business interactions, or some other type of social commitment.

Reliability: The reliability of the scale was determined by test –retest and internal consistency method. The test- retest reliability was calculated to be 0.87 and the consistency value for the scale as 0.90.

Validity: Besides face validity, as all the items of the scale are concerned with the variable under focus, the scale has high content validity. The scale was validated against the external criteria and coefficient obtained was 0.94.

Scoring: The scale consists of fifty statements. All statements are of positive manner.

Strongly Agree - 5
Agree - 4
Undecided - 3
Disagree - 2
Strongly Disagree -1

Norms for interpretation of the raw scores (for each area)

Scores	**Level of Psychological Well- Being**
10-12	Very Low
12-16	Low
16-43	Moderate
43-48	High
48-50	Very High

Norms for interpretation of the raw scores (for entire scale)

Scores	Level of Psychological Well- Being
50-58	Very Low
58-83	Low
83-217	Moderate
217-242	High
242-250	Very High

Using the above scales the data was collected personally interviewing the respondent at the visited sites.

Physical well being :- The physical stress was assessed using modified Occupational stress scale by Srivastava, A.K (1976) to group the items of scale into sub components and to be objective in analysis, factor analysis was carried out.

Physical stress

Category	Range of Scores
Low	17 – 39
Moderate	40 – 62
High	63 – 85

Body Discomfort Scale:-The postural discomfort of workers of selected sectors was assessed using Body Discomfort Scale developed by Kuorinka (1987). Discomfort in different body parts i.e. Neck, shoulders, upper arm, upper back, lower arm, middle back, lower back, buttock, thighs and legs were studied.

Body Discomfort

Category	Range of Scores
Low	10 – 23
Moderate	24 – 37
High	38 – 51

Intensity of Pain

Category	Range of Scores
No	10 – 20
Mild	21 – 30
Moderate	31 – 40
Severe	41 – 50

Health profile

Yes - 1

No - 0

Reliability:- The reliability of the self structured schedule was performed with the help of cronbach's alpha technique which requires more than 0.60 value of the alpha.

3.9 PROCESSING OF DATA

1-Coding- Coding refers to the process of assigning, numbers other symbols to answers.

2-Editing-Editing of data is a process of examine the collected raw data (especially in surveys) to detect errors and to correct these. When possible and have been well arranged to facilitate coding and tabulation.

3-Classification-Research studies result in a large volume of raw data which must be reduced in to homogenous group to get meaningful relationship of group or classes on the basis of common characteristics. (Average) of the square of the deviation measured from the mean or assumed mean.

3.10 STATISTICAL ANALYSIS

Data collected was analyzed statistically with the help of the following statistical techniques-

Frequency - It was used to find out the number of respondent in a particular cell.

Frequency = Sum of the respondent in particular cell (in number).

Percentage – It was used to make simple comparisons.

Mean – It is the sum of all observation divided by the total number of observation.

Standard deviation – It is usually denoted by letter (small sigma) of the Greek Alphabet as a measure of Dispersion. "Standard deviation is the Square root of the arithmetic mean (average) of the square of the deviation measured from the mean or assumed mean.

T-test and ANOVA (F- test)- For the purpose of comparisons of Physical and Psychological wellbeing among different categories of variables parametric t- test & F-test has been used for the comparison of two groups t- test were applied and for more than two groups one way ANOVA has been used.

Chi-square test - For the purpose of testing the associations among the different groups of workers and different attributes, considering as categorical variable, non parametric chi-square test has been used.

Regression analysis- For the purpose of the causes & effect relationship the simple linear regression analysis has been used.

Factor analysis- For the identification of sub dimension of physical wellbeing measured using scale of occupational stress developed by Srivastava, A.K. (1976) in addition with self made interview schedule, factor analysis has been performed.

The data was analyzed with above statistical techniques using SPSS software.