# CHAPTER I

## INTRODUCTION

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## 1.1 Introduction

Beedi industry is one of the biggest cottage industries in India and a major informal or unorganized sector of work in our country. As per revised international *System of National Accounts* (SNA), 1993 the informal sector comprises entities producing goods or services with the primary purpose of giving the people involved a source of income and employment. These units often function on a small scale, with little to no separation between labour and capital as factors of production. The first Indian National Commission on Labour (1966-96) defined „unorganized sector workers" as-*"those workers who have notbeen able to organize themselves in pursuit of their common interest due to certain constraints like casual nature of employment, ignorance and illiteracy, small and scattered size of establishment".* Definition of unorganized workers was also recommended by National Commission for Enterprises in the Unorganised Sector (NCEUS), 2007 as „*Unorganized workers consist of those working in the unorganized sector or households, excluding regular workers with social security benefits, and the workers in the formal sector without any employment and social security benefits provided by the employers".* Informal sector represents an important part of the economy and certainly of the labour market especially in developing countries. It also plays a major role in employment creation, production and income generation. In India, nearly 93 percent workers are engaged in the unorganized or informal sectors and 91 percent of them are women (Ramakrishnappa and Harish, 2015).

Beedi industry is categorized as unorganized and belongs to the small-scale cottage industries sector. Beedi is a cheap form of tobacco consumption that is extremely popular among the rural poor and is smoked by 8 percent of adult Indians (Puri, 2020). It is a traditional agro-forestry based 2nd largest industry in India which needs an intensive labour force. As per the report (GOI, 1995), the beedi industry is the 4th largest employment-generating sector in India after agriculture, handloom, and construction. Beedi rolling is primarily done at homes, where many women are employed ( Nafees et al, 2021).

In India, the manufacturing of beedi can be divided into two categories such as registered and unregistered. Unregistered businesses are exempt from paying taxes because they produce less than 2 million beedis annually while the registered businesses are large organizations that produce more than 2 million beedis annually, required to pay excise duty on their product,

and are therefore legally required to follow labour laws. But with the introduction of new GST policy 2019, enterprises with a turnover of INR 4 million, however, are no longer liable to pay tax. With the implementation of the new policy, 98 percent of beedi manufacturing would remain exempt from taxation (Arora et al., 2020). It is estimated that 300 major companies produce branded beedis and thousands of small-scale manufacturers and contractors produce the majority of beedis in India ( Latha, 2018).

The Govt of India (2001) estimated that there are 45 lakhs workers engaged in the beedi industry among them 90 percent are home-based women workers. As per the report of the Standing Committee on Labour, there are 49.90 lakhs beedi workers in India of whom 18.29 lakhs belong to West Bengal (ILO, 2008). One of the main reasons for the beedi industry to flourish in West Bengal is the availability of cheap labour. Because of the increasing population, unemployment, poverty, and illiteracy, the beedi industry appears to be an easy way of earning a wage for the lower class of people.

### 1.2 Selection of the Study Area

Koch Bihar is a socio-economically backward district in West Bengal and the highest percentage of household industrial workers in the district is concentrated in Tufanganj Subdivision (34.85 percent) as per Census 2011. Though it does not specify in which household industry they are being engaged, after doing a pilot survey it has been detected that most of them are engaged in beedi industry and the government sources also claim that beedi industry is predominant among any other household industries in Koch Bihar district.

There are 9320 registered women beedi workers in Tufanganj subdivision (As per 2018 registration, Ministry of Labour Welfare Office, Koch Bihar District). People belonging to poor socio-economic strata have chosen beedi rolling as an alternate source of income to maintain their families in a better way. Majority (>90 percent) of the workers in the beedi industry are women who are mainly engaged in home based beedi rolling in study area. Therefore, the women beedi workers in Tufanganj Subdivision can be the best representative of the whole beedi workers community of the district.

### 1.3 Study Area

Tufanganj subdivision is the eastern most subdivision of Koch Bihar district, West Bengal. It mainly consists of two community development blocks namely Tufanganj I and Tufanganj II consisting of 25 gram panchayats and one Municipality consisting of 12 wards. The subdivision has it‟s headquarter at Tufanganj. The subdivision is located at 26°17' N to

26°32' N and 89°67'E to 89°86' E. The study area is bounded in the north by Alipurduar district, in the east by Assam, in the south by Dinhata subdivision, and in the west by Koch Bihar Sadar subdivision.

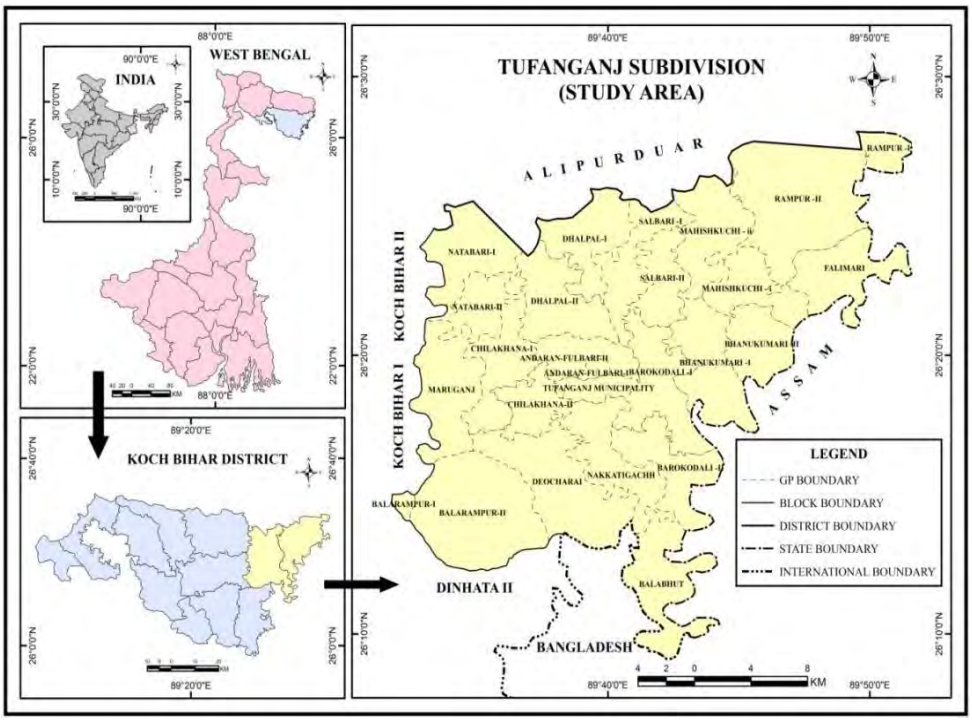



**Fig 1.1 Location Map of the Study Area**

## 1.4 Statement of the Problem

Beedi industry is a major informal or unorganized sector that provides a large number of employment opportunities to the rural and semi-urban people who are socio-economically backward. Tufanganj subdivision is the major area of beedi rolling center in Koch Bihar district where people find their way of earning by rolling beedi and most of them are women. Poverty is the main reason that induces them to take up beedi rolling as an occupation. They are facing several problems, such as poverty, illiteracy, unemployment, sickness, low wages, irregular payment of wages, exploitation by middlemen or contractors, and so on. These low wages have an impact on the household economy especially where women are the bread earners of the family. This implies that the beedi industry is exploiting women beedi workers more while empowering them less. The workers are forced to work continuously for long hours to earn more sitting in improper working postures which lead to various health issues. Direct inhalation of tobacco flakes and dust lead to the cause of serious health hazards to the workers and also people staying around. Therefore, there is a necessity for a comprehensive study on the socio-economic conditions of women beedi workers in the study area to know

their social status, economic status, and their occupational health hazards. But there is no precise data and information about the condition of beedi workers in the Ministry of Labour Welfare Office and any other government sources. Moreover, there is no such intensive study that will help to understand their living and working conditions and the actual underlying causes behind such deprivation in the study area. Being a researcher I felt that there is a necessity to highlight such issues.

### 1.5 Objectives

The main objectives of the study are as follow:

1. To assess the socio-economic conditions of women beedi workers in Tufanganj Subdivision.
2. To assess the impact of beedi rolling on health condition of women beedi workers in the study area.
3. To evaluate the implementation status of legal provisions and schemes for the welfare of women beedi workers.
4. To find out their problems and suggest remedial measures for the upliftment of socio-economic status of women beedi workers.

### 1.6 Hypothesis

To fulfill the objectives following hypothesis have been taken:

1. Educational level of female beedi worker plays a key role in determining her numberof child birth.
2. Level of income of women beedi worker has significant impact on family decision-making.
3. The health condition of women beedi workers is associated with hours of beedi rolling.

### 1.7 Methodology

Methodology is an integral part of any research. The following methodology has been followed to analyse the socio-economic conditions of women beedi workers in the study area.

#### 1.7.1 Operational Design

In order to fulfill the objectives, the entire study has been done in 3 sessions.

- **Pre Field Session:** This includes the review of previous literature, preparation

of questionnaire, pilot survey of study area, gathering information and relevant data from various sources, preparation of blueprint of the work, formation of objectives and hypothesis.

- **Field Session**: In this session, intensive field survey has been done to collect primary data from the field.
- **Post Field Session:** In this part, tabulation of collected data, analysis and interpretationhas been done. Finally the report has been written.

### 1.7.2 Data Sources

Both primary and secondary data have been used in the study.

- **Primary Data**

The study is mainly based on primary data collected from the field through a rigorous field survey. Data has been collected by the researcher from the field during July 2021 to December 2021.

- **Secondary Data**

The secondary data has been collected from Panchayat office, BDO office, Department of Labour Organization, Ministry of labour welfare office, relevant Government websites and various articles published by various authors. Population or demographic details have been collected from the Census report.

### 1.7.3 Sample Size

To determine the sample size, following formula by Yamane (1967) has been used

$$\mathrm{n} = \frac{N}{1+(e)^2}$$

Where, **n** is the sample size, **N** is the population size and **e** is the level of precision (0.05). Here, total registered beedi workers in Tufanganj subdivision is 9320. As per this equation the minimum sample size must be 384 i.e., 4 percent of the population. For betterment of the result and accuracy, researcher has taken 6 percent of total population as sample and finally the sample size is 560.

As far as the personal interview is concerned, only one registered women beedi worker from each household, the worker who was willing to participate in the survey and worker having at least one year work experience had been questioned.

### 1.7.4 Sampling Technique

Since the objective of the study is to find out the socio-economic conditions of women beedi workers in Tufanganj subdivision, a purposive random sampling method has been applied. Only beedi worker‟s households have been selected purposively and then from villages and municipality wards, the households have been selected for interview adopting simple random sampling. They have been interviewed face-to-face by the researcher using a schedule. A formal, structured, open-ended, and close-ended household schedule has been used for the collection of primary data.

### 1.7.5 Sampling

Total number of beedi workers in Tufanganj Subdivision is 9545 of which 9320 are women beedi workers. Since the study deals with the socio-economic conditions of women beedi workers, only the women beedi workers were selected for the study.

- **Rural Area**

The subdivision consists of two (2) C.D blocks; from these blocks 50 percent GPs from each block were selected. From these selected GPs, 6 percent households of women beedi workers were selected randomly. Thus the number of households in Tufanganj C.D block I was 296 and the number of households in Tufanganj C.D block II was 190. GPs selected from block I are Nakkatigach, Chilakhana I, Deocharai, Maruganj Balabhut, Andaranfulbari I and II, and GPs selected from block II are Bhanukumari I and II, Salbari I and II, Barokodali I and II.

- **Urban Area**

From the Municipality area, out of 12 wards, 50 percent wards i.e., 6 wards (selected wards are 1,3,4,10,11,12) were selected and from those selected wards 6 percent of beedi worker households were surveyed. Thus the number of households in the municipality area became 40.

As Tufanganj subdivision has 2 Census Towns, 50 percent of them i.e., 1 Census Town were selected and 6 percent of beedi worker households from this Census Town were surveyed. Thus, the number of surveyed beedi worker households in Census Town was 34 and name of the selected Census Town is Kamat fulbari.

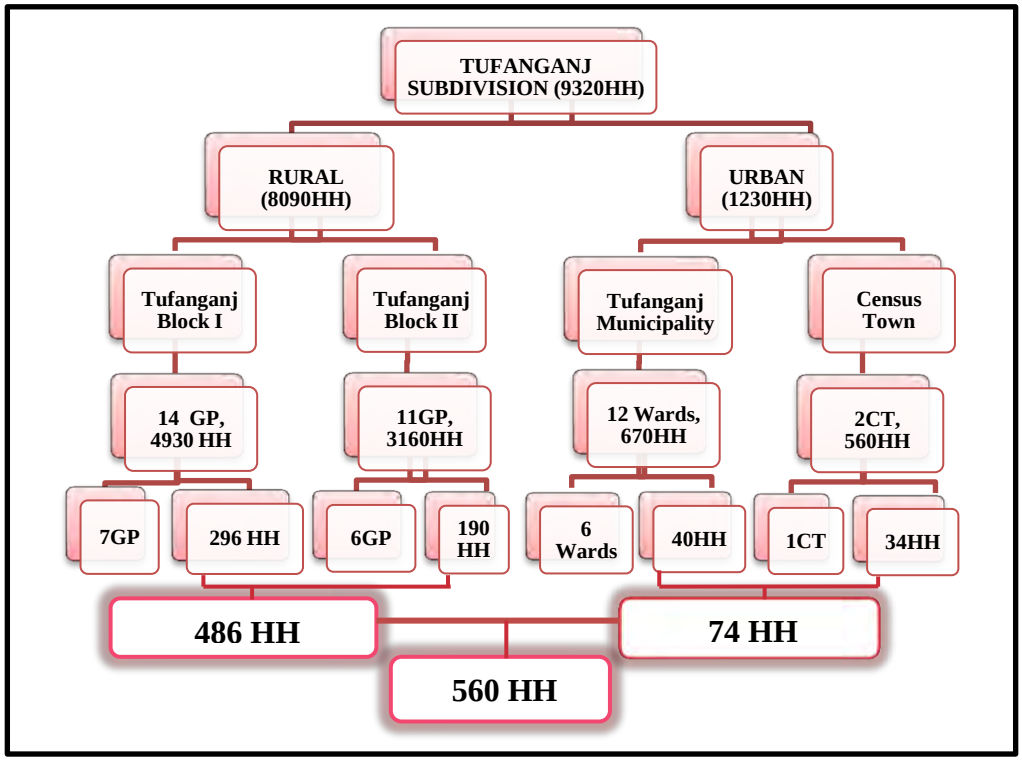



**Fig 1.2 Model of Sample Design**

### 1.7.6 Tools and Techniques

Different statistical tools and techniques have been used to analyze the data obtained from both primary and secondary sources. The Chi-Square test has been done to show the association between the level of income and different socio-economic variables. Regression analysis has been done to show the effect of various socio-economic factors on the level of income. Principal component analysis has been done to analyze the factors which are responsible for women to get into such hazardous occupations. Livelihood Security Index has been performed to show the degree of insecurity of basic socio-economic opportunities among the women-beedi workers in the study area. Suitable cartographic techniques such as bar graphs, pie graphs, line graphs, and choropleth maps have been performed on the requirement basis. Graphical representations like maps and diagrams have been made on ArcGIS platform and statistical analysis has been conducted in SPSS 23 version.

### 1.7.7 Statistical Tools

**1. Disparity Index**

$$DI = \log(X2/X1) + \log (Q-X1)/(Q-X2)$$

Where, X2>X1 and Q =200

This (Sopher‟s Disparity Index modified by Kundu & Rao) method is most suitable to measure the inequality between two variables. The value of DI „0‟ means the perfect equality between two variables. Greater value indicates higher inequality.

**2. Chi Square Test**

To show the association between different variables Chi- Square test has been conducted. It is a non-parametric test mainly used to check the association between two categorical variables. The Chi –square test was used by Karl Pearson in 1990. The quantity of Chi square describes the magnitude of the discrepancy between theory and observation. The formula of Chi – Square test is

$$\chi^2 = \frac{(O-E)2}{E}$$

Where,

***O***= Observed Frequency

***E***= Expected Frequency

Null Hypothesis (Ho): There is no association between the variables.

Alternative Hypothesis (H1): There is association between the variables.

**3. Linear Regression**

To determine the effect of monthly income of women beedi workers on their household income a linear regression has been done. Linear regression is a basic and commonly used type of predictive analysis. It attempts to model the relationship between two variables by fitting a linear equation to observed data. One is an explanatory or independent variable and the other is considered to be a dependent variable. A linear regression line has an equation of the form

$$Y = a + bX$$

Where, **X** is the explanatory variable (monthly income of women beedi worker) and **Y** is the dependent variable (monthly household income of a women beedi worker household).

**b** = Slope of the line

**a**= Intercept (the value of y when x=0)

**4. Multiple Linear Regression**

A multiple linear regression has been conducted to find out the factors determining the monthly income of women beedi workers. Multiple regression is a statistical technique that can be used to analyze the relationship between a single dependent variable and several independent variables. It is also called multiple linear regression. It is assumed in multiple linear regression that the independent variable has a linear relationship with the dependent variable. In multiple regression, the dependent variable is continuous and independent variable can be dichotomous or continuous even both can be added. Generally multiple regression tells how much of variance in the dependent variable can be explained by given independent variable. The multiple regression produces the degree and direction of relationship between dependent and independent variable.

Multiple regression equation is -

$$y = \alpha + \beta_1 x_1 + \beta_2 x_2 \ldots\ldots\ldots\ldots + \beta_n x_n$$

Where, $y$ is the dependent variable

$\alpha$ **is the intercept**

$\beta_{1,2}\ldots\ldots \beta_n$ **is the beta coefficient**

$x_{1,2}\ldots x_n$ **is the independent variables**

**Table 1.1 List of Variables for Multiple Linear Regression**

| **(Y)** | **Dependent variable** |
|---|---|
| | Monthly income of women beedi workers |
| **(X)** | **Independent variable** |
| $\mathbf{X_1}$ | Age of women beedi worker |
| $\mathbf{X_2}$ | Years of schooling |
| $\mathbf{X_3}$ | Nature of employment(dummy to represent factory based worker as 1 and home based beedi worker as 0) |
| $\mathbf{X_4}$ | Hours of beedi rolling |
| $\mathbf{X_5}$ | Wage rate per 1000 beedi |
| $\mathbf{X_6}$ | Number of beedi rolled per day |
| $\mathbf{X_7}$ | Experience of work in Years |

*Source: Prepared by the researcher*

**5. Binary Logistic Regression**

Binary logistic regression model was conducted to determine the impact of level of income and some other variables on women‟s decision making capacity. Logistic regression is a process of modeling the probability of discrete outcome given an input variable. The most common logistic regression model is binary logistic regression (BLR), which is fit for a

dichotomous dependent variable. Dichotomous variable is that variable that can take only two values such as true/false, yes/no, and so on

In general, a logistic regression model can be characterized as follows.

$$Logit\ (p) = log\ (\frac{Pi}{1-Pi}) = \beta_0 + \beta_1 x_{1i} + \ldots\ldots + \beta_n x_{ni}$$

Where, $p$ = the probability of the outcome,

$i$=i$^{th}$ observation in the sample,

$\beta_0$ = intercept term and

$\beta_1, \ldots\ldots \beta_n$ = coefficients of explanatory variable

$X_1 \ldots . X_n$ = explanatory variables

**Table 1.2 List of Variables for Binary Logistics Regression**

| **Y** | **Dependent Variable** |
|---|---|
| Decision making power of a woman beedi worker (1=if the woman has a role in taking family decisions, 0= if she has no role). | |
| **X** | **Independent Variable** |
| $X_1$ | Age of women beedi worker<br>(<40 Years=1,>40 Years=2 |
| $X_2$ | Educational status of women beedi worker<br>(Illiterate=1, Literate=2) |
| $X_3$ | Educational status of worker‟s household head<br>(Illiterate=1, Literate=2) |
| $X_4$ | Level of monthly income of women beedi workers<br>(1=<2000,2=2001-4000,3=4001-6000,4=>6000 |
| $X_5$ | Quality of relationship of women beedi workers with other family member<br>(1=Good,2=Poor) |
| $X_6$ | Membership of SHG<br>(1=Yes,2=No) |
| $X_7$ | Gender equitable attitude in family<br>(1= Gender equitable, 2= Gender inequitable attitude). |

*Source: Prepared by the researcher*

## 6. Principal Component Analysis

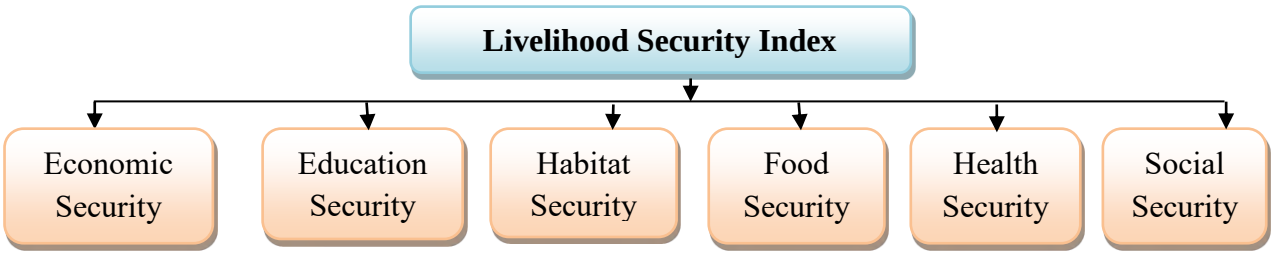
In order to determine the factors which are responsible for women to get into such hazardous occupations like beedi rolling, PCA has been applied. Principal component analysis or PCA is a well-liked method for analyzing huge datasets with a high number of dimensions/features per observation. It improves data interpretability while conserving the most information possible and allows for the visualization of multidimensional data. In formal terms, PCA is a statistical approach for lowering a dataset's dimensionality. To do this, the data are

transformed linearly into a new coordinate system, where (most) of the variance in the data can be expressed with smaller dimensions than the original data.

Here, 19 Variables have been taken into consideration to find out the factors. The variables include 1. Age of women,2. Age of women at the time of marriage, 3. Age of women at the time of first birth, 4. Educational Qualification of respondent, 5. Marital status of respondent,6. Number of children of respondent, 7. Number of girl child of respondent, 8. Family Size, 9. No. of dependent family members, 10. Poverty status, 11. Occupation of household head, 12. Monthly household income, 13. Monthly income of respondent, 14. Landholding size, 15. Average loan per person, 16. Availability of other job opportunity, 17. Having other professional skill, 18. Any other family member engaged in beedi rolling, 19. Livestock population.

**7. Livelihood Security Index**

A simple way to better understand the means of livelihood used by poor family members is the sustainable livelihood approach (SLA). The SLA is a multifaceted, integrative, and logical strategy for eradicating poverty, in contrast to other strategies (Kamaruddin & Samsudin, 2014). Here, the Livelihood Security Index was computed based on six livelihood indices as follows.




It is assumed that all indicators contribute equally to the aggregate index determining the household livelihood security index. Six livelihood outcomes made up the household's livelihood security index, which was calculated based on status, quality, and accessibility. By combining the results of the indicators, household livelihood indexes for economic, educational, health, housing, food, and social security were created. It was initially required to standardize each subcomponent indicator as an index because they are all measured on various scales. For standardization of data, following formula has been adopted from the Human Development Index to generate the life expectancy index (UNDP, 2007).

$$\textbf{Zindj} = \frac{Indicator - Minimum\ Value}{Maximum\ Value - Minimum\ Value}$$

Household Livelihood Index (HLSI) was calculated by averaging the standardized

indicators by using this formula.

$$HLSI = \frac{\sum_{i=1}^{i} Z_{indj}}{i}$$

Where, **HLSI** – Household Livelihood security Index

**i** – Number of indicators used in the index

After the construction of HLSI is done, the overall Livelihood Security Index was calculated using the following formula.

$$LSI_i \frac{\sum_{i=1}^{i} W_i . HLSI_i}{\sum_{i=1}^{i} W_i}$$

Where, **LSI** = Livelihood Security Index

**Wi**= Weight determined by the number of indicators used each index

**HLSI** = Household Livelihood Security Index

After the construction of the index value the mean and SD value of each index has been calculated. Then SD is divided by 2 and half of SD is added with the mean value to form the „High" category and half of SD is subtracted from the mean to form the „Low" category and the value lying between this high and low category has been categorized as „Moderate" category. After that, both rural and urban households have been categorized into three categories, as Very Low, Low, and Moderate or Low, Moderate, and High based on their index value.

*If the index value is less than 0.5 then it has been categorized as Very Low, Low, and Moderate and if the index value is above 0.5 then it was categorized as Low, Moderate, and High.

### 8. Gini Co-efficient

It measures the degree of inequality of income among a population and serves as an indicator of economic inequality. The coefficient has a value between 0 and 1, where 0 denotes complete equality and 1 denotes perfect inequality.

**Table 1.3 List of Indicators for Livelihood Security Index**

| Sl No. | Indicators | Score | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 |
| Economic Security | Monthly income of the family | 0 | <5000 | 5001-10000 | 10001-15000 | >15000 | - |
| | Monthly income of the women beedi worker | 0 | <2000 | 2001-4000 | 4001-6000 | >6000 | - |
| | Landholding size | No | <2 katha | 2-3 katha | >3 katha | - | - |
| | Poverty status | No | AY | AAY | PHH | SPHH | - |
| | Savings/Person | 0 | <500 | 500-1000 | 1001-1500 | >1500 | - |

| Sl No. | Indicators | Score | | | | | |
|---|---|---|---|---|---|---|---|
| | | **0** | **1** | **2** | **3** | **4** | **5** |
| | No. of earning member in family | 0 | 1 | 2 | 3 | >4 | - |
| | No. of dependent member in family | >4 | 4 | 3 | 2 | 1 | - |
| | Percentage of income expensed on food | >75 % | 61-75 % | 45-60% | >45 % | - | - |
| **Educational Security** | Female literacy level | Illiterate | Primary | Upper Primary | Secondary | H.S | >H.S |
| | Highest literacy level in household | Illiterate | Primary | Upper Primary | Secondary | H.S | >H.S |
| | School enrollment | 0 | 1 | 2 | 3 | 4 | 5 |
| | Availability of educational centers | No | Only 1 type | 2 types | 3 types | 4 types | All types |
| | Access to school(in km) | >10 km | 5-10km | <5 km | - | - | - |
| **Habitat Security** | No. of room | 0 | 1 | 2 | 3 | >3 | - |
| | Ownership of house | Other | Rented | Own | - | - | - |
| | Floor type | Kucca | Mixed | Pucca | - | - | - |
| | Wall type | Plastic | Bamboo | Tin | Brick | - | - |
| | Roof type | Thatched | Tiled | Tin | Asbestos | Concrete | - |
| | Space of beedi rolling | Kitchen | Bedroom | Premises | - | - | - |
| | Access to drinking water | No supply | Own Tube well | Govt supply | - | - | - |
| | Sanitation facility | Open Defecation | Shared Toilet | Own Toilet | - | - | |
| **Food Security** | Food frequency | 1 Meal | 2 Meals | 2 Meals+1 Short | 2 Meals +2 Shorts | 3 Meals+1 Short | - |
| | Food item diversity | 1 | 2 | 3 | >3 | - | |
| | Quality of food | Low | Moderate | High | - | - | - |
| | Per day calorie intake by respondent | <800 Cal | 800-1000 Cal | 1000-1200 Cal | 1200-1400 Cal | >1400 Cal | - |
| **Health Security** | Availability of health care centers | No | Only 1 type | 2 types | 3 types | 4 types | All types |
| | Access to health care services( in KM) | >10 km | 5-10 km | <5 km | - | - | - |
| | No. of days the respondent was unable to work due to illness in last month | 0 | 1-3 | 4-6 | >6 | - | - |
| | Frequency of illness in family | Very Frequent | Frequent | Moderate Frequent | Rare | Very Rare | - |
| | Place of delivery | Home | Govt Hospital | Nursing home | - | - | - |

| Sl No. | Indicators | Score | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 |
| Social Security | Level of assistance received from Government and NGO's | Very Low | Low | Moderate | High | Very High | - |
| | Level of support received from social network or relatives/kin in neighborhood | Very Low | Low | Moderate | High | Very High | - |
| | Level of active participation in community organization | Very Low | Low | Moderate | High | Very High | - |
| | Level of use of mobile phone/ internet | Very Low | Low | Moderate | High | Very High | - |

*Source: Prepared by the researcher*

***** Same score i.e., 1 has been given for the educational and health centers categories. For example, households having access to only primary school have been given only 1 score, in case of having access to primary and upper primary school the households have been given 2 score, similarly, households having access to primary school, secondary school and college have been given 3 score. The same has been done for availability of health care centers also.

### 1.8 Significance of the Study

This study intends to explore the dynamics of socio-economic conditions of women beedi workers and thereby try to analyze the intricate relationships that these workers have with the region‟s economic framework. The study also explores how beedi industry forms an integral part of the lives of the people in the study area and how an informal sector of the economy has supported the lives of an entire community.

This study is unique and different from other work as there is a comprehensive study on their demographic details, socio-economic characteristics like education, occupational structure, income level, intensity of poverty, wage structure, living and working conditions, involvement of children in beedi making, housing condition, level of deprivation, social status, perception in decision making, freedom of expression, etc. The association between level of income and socio-economic conditions has been shown here to draw the relation between the level of income and their standard of living. A depth study on the health hazards caused by beedi rolling has also been analyzed here. Further, this study has focused on the critical review of existing legal provisions, policies, and their enforcement status and also has drawn relevant measures to improve the working conditions and health status of women workforce in the beedi industry in the study area. The study also helps to identify the main constraints of the development of beedi workers in the study area. Thus, the findings will be helpful for the planners to formulate strategies and a development plan can be prepared for beedi workers. Hence, the assessment of socio-economic conditions of women beedi workers

in Tufanganj subdivision is very much important in the present time and has a deep significance.

### 1.9 Limitations of the Study

The current study sheds light on the beedi workers' backwardness. Due to lack of precise data and lack of time, the researcher chose just the Tufanganj Subdivision of Koch Bihar district, even though beedi workers reside in other areas of the district. However, no precise information has been discovered that could be used to figure out the constraints of beedi workers in the study area. Moreover, during the field survey researcher faced so many problems in data collection which sloth the work. Even though the researcher made every effort to conduct an in-depth analysis of the socio-economic circumstances of beedi workers in the study area, it is possible that some aspects of beedi workers were left out. As a result, there will be plenty of scope for further research on the beedi worker community.

### 1.10 Organization of the Study

The present study is organized into eight chapters as given below;

- **Chapter I: Introduction**

  This chapter deals with the objective, hypothesis, statement of the problem, sampling technique, methodology, significance of the study, limitations, organization of study and review of past literature.

- **Chapter II: Brief profile of the Study Area**

  This chapter deals with the salient features of Koch Bihar district and Tufanganj Subdivision. Demographic characteristics, literacy rate, work participation rate, trend of population growth etc. have been discussed in this chapter.

- **Chapter III: Nature and Extent of Beedi Industry**

  An overview of the nature and extent of the beedi industry has been discussed here.

- **Chapter IV: Socio-Economic Conditions of Women Beedi Workers**

  A detailed analysis of the demographic status, social status, housing condition, economic status, work profile, and income structure of women beedi workers in Tufanganj Subdivision have been dealt within this chapter.

- **Chapter V: Health Status of Women Beedi Workers**

  A discussion on the occupational health hazards of women beedi workers due to beedi rolling has been analyzed here.

- **Chapter VI: Appraisal of Laws and Govt. Schemes for the Welfare of Beedi Workers**

  This chapter analyzes the existing laws and regulations for the beedi industry. The various schemes sponsored by the state and central government and their implementation status in the study area have been discussed here.

- **Chapter VII: Problems of Women Beedi Workers and Remedial Measures**

  Assessments of the problems of women beedi workers and suggestive measures have been analyzed in this chapter.

- **Chapter VIII: Findings and Conclusion**

  Major observations, suggestions, and conclusion have been drawn here.

## 1.11 Review of Literature

### 1.11.1 Beedi Industry as a Means of Employment Generation

*Arora et al., (2020)* made a study on the trends, employment and wage differences in beedi industry. The study illustrates that only 0.65 percent of the manufacturing sector's overall gross value added (GVA) is contributed by the beedi industry. The majority of employment in this sector is provided by contractors. Workers at beedi industry only receive 17 percent of the pay of those employed in other manufacturing sectors. Although women make up the majority of beedi workers, their annual salaries range INR 7,000 to 8,000 (USD 155.7 to 178) less than those of their male counterparts. The wages of beedi workers have declined over time despite a rise in industry earnings from INR 1.7 billion (USD 37.8 million) in 2005–2006 to INR 12.8 billion (USD 285 million) in 2010–2011.

According to the study by *Chakraborty (2013),* women have chosen to take on a dual role by simultaneously managing their homes and their income through beedi bundling. 55 women were purposefully chosen from Mahiswara Char for the study. Study reported that 60 percent of women beedi workers are illiterate, and the bulk of them are between the ages of 40 and 60. The local impoverished women are influenced by their extreme poverty, low level of education, lack of alternative work skills, and status as environmental refugees because of their vulnerability to riverine risks.

*Gopal (1999*) made a study where it has been shown that the beedi industry is able to make a significant profit with little investment in infrastructure and substantial benefits to labour by

using a system of production that uses contractors and home-based workers. The perception of home workers as housewives and the practise of working from home as a way for a woman to take care of her children and take care of her household duties while earning much-needed income completely obscures the reality that women not only put in long hours to meet production targets set by employers, but also have no idea how they arrived at the wage levels they set.

Another study by *Harish et al., (2022)* highlights the impact of women's involvement in India's beedi sector. Since almost 90 percent of Indian adults smoke beedi, the beedi industry has helped to develop the Indian economy. The authors suggested that the government must promote this sector so that the people can participate in a new system to improve their socio-economic situation. Therefore, this study is crucial for researchers to comprehend the effects of globalization and women's employment on the growth of the Indian economy.

*Nandi et al., (2014)* have showed that about 3.4 million full-time and 0.7 million part time workers are engaged in beedi industry. Additionally, beedi workers were among India's lowest paid workers. Higher beedi excise taxes and regulations are unlikely to stop overall economic growth or cause widespread economic hardship and unemployment among small-scale beedi labourers. The average annual economic production per beedi worker is roughly US$143, which is significantly less.

### 1.11.2 Socio-Economic Conditions of Women Beedi Workers

*Ansari and Raj (2015)* examined the relationship between the socio-economic conditions of women engaged in the beedi rolling industry in particular in their paper. The study revealed that the beedi industry in India employs the majority of women in the unorganised sector since women are more naturally suited to rolling beedis due to their deft fingers. The country's lower socio-economic classes of people primarily perform the work because they lack the necessary training and education to adopt alternative employment. Women prefer to roll beedi since they can do it from home while also taking care of other household duties. As a result, they manage the households while also supplementing the family's revenue. The Study also concluded that there is still a significant amount of gender bias in terms of wage and exploitation.

In the book *„„Bidi Rolling in Rural Development'"', Giriyappa (1987)* has attempted to assess working conditions and the output capability of beedi workers. He has concentrated his research on the consumption patterns and standard of living of beedi workers in the

Mangalore and Buntwala Talukas of Karnataka's Dakshina Kannada District. The author has proposed many welfare initiatives to promote the health and well-being of beedi rolling workers. He noticed that more than 80 percent of beedi rollers are female in both urban and rural areas, and because the majority of them are uneducated, the author has advised that suitable facilities for the dissemination of adult education be provided. The author also advised to improve the health care facilities beedi rollers.

*Mishra and Mishra (2015)* revealed that 98 percent of the beedi workers came from the disadvantaged groups in society; therefore they had poor social, educational, health, and economic standing. The main factor that led the respondents to choose beedi rolling as a profession was extreme poverty. The vast majority of respondents were employed by contractors, which demonstrated that they were subjected to exploitation. 58 percent of respondents reported monthly incomes of less than Rs. 1,500, which is insufficient to support a family. According to 70 percent of the survey participants, their jobs were responsible for their health issues. Researcher suggested that women‟s organizations like AIDWA that work in the unorganised sector must run awareness campaigns among the female beedi workers in Karchhna to empower them to resist all types of oppression.

*Selvan and Mabel (2013)* made a study and the primary goal of the study was to investigate the socio-economic circumstances of female beedi workers and potential solutions for raising their standard of living. The report also described the women beedi workers in Radhapuram Taluk, Tirunelveli District of Tamil Nadu, including their educational background, marital status, and place of residence, type of family, savings, borrowings, and economic situation. Through this study, it was discovered that although beedi rolling offers women in rural areas a different employment option, the pay is subpar compared to that of other industries. The wages paid to them are extremely low; hence it is recommended that the minimum pay rate be raised. The study suggested that the socio-economic situation of the workers in the beedi industry can be undoubtedly improved if a fair wage system is implemented.

### 1.11.3 Health Status of Women Beedi Workers

*Das (2013)* has examined the occupational health risks of women beedi workers' in his paper. He demonstrated how female beedi workers must make the ultimate sacrifice in order to provide their families' financial security. Therefore they belong to the group of people who are at a high risk of experiencing tobacco-related occupational health hazards. The current

study painted a picture of the serious occupational health risks that the district's female beedi workers must deal with.

It is clear from the study by *Pandian and Duraisingh, (2021)* that there are significant health risks among the beedi workers. According to the study's findings, women who work continuously with beedis and who smoke start to lose skin on their fingertips by the time they are 45 years and are no longer able to roll beedis. They have no alternative skill or occupation; therefore they are forced to turn to begging. It is therefore appropriate to adopt the policy framework as an efficient control process to improve the welfare of the women beedi rollers in order to rehabilitate a million people in Tamilnadu at this time.

*Ramakrishnappa and Kumari (2014)* examined the types of health risks being faced by beedi workers households in Karnataka as well as the income and employment generated by beedi rolling. The activity of rolling beedis has become very crucial in helping disadvantaged households in the Dakshina Kannada district. The rolling of 2,37,543 beedis was found to generate an annual average total revenue for the household of beedi rollers of Rs. 15,870.46. Therefore, the beedi dust in the air impacts not only the beedi roller but her entire family as well, causing respiratory issues. The study discovered that health risks such body aches, fevers, breathing issues, headaches, and eyestrain are frequently experienced by women beedi workers in that particular region.

*Singh, Rana, & Mishra (2014)* made an intensive research on *„„Occupational Health Problems Amongst Women Beedi Rollers in Jhansi, Bundelkhand region, Uttar Pradesh"."* The objective of the study was to find out how common occupational health issues are among women beedi rollers in Jhansi, Uttar Pradesh, in the Bundelkhand region of India. Author showed that beedi rolling poses a serious occupational health risk because it exposes workers to nicotine, nitrosamines, and other dangerous chemicals that are easily absorbed by the worker through the skin, respiratory epithelium, and mucous membranes of the mouth, nose, and intestine. According to the current study, women beedi rollers frequently have health issues that may be caused by inhaling tobacco flakes directly.

According to *„„Awareness on Health and Social Welfare Benefits among Beedi Workers- A Community Survey""*by *Sudina et al., (2015)*, beedi rolling is the primary occupation of women and children living in many villages across the nation, employing about 4.2 million people. Madhya Pradesh has the highest percentage of beedi workers (18.3 percent), followed by Tamil Nadu (13.8percent) and Andhra Pradesh (14.4percent). Study also highlights that a

variety of programmes to better the living circumstances of beedi workers and their families are included in the beedi workers' welfare fund. The study's goal was to determine the level of knowledge of these advantages based on 200 beedi workers ages between 20 to 70 years in the chosen Karnataka villages.

To determine the consequences of beedi rolling on health, *Yasmin et al., (2010)* did a comparative study and looked at the health issues of 197 female beedi rollers in their paper. According to the study, more than 70 percent of respondents experienced respiratory issues, such as COPD and asthma, while more than 40 percent of beedi rollers experienced ocular, gastrointestinal, and mental disorders, and more than 25 percent of respondents experienced osteological issues. The prevalence of wheezing, bouts of shortness of breath accompanied by wheezing, dyspnea, etc. was much greater among the beedi workers. The beedi rollers' total RBC, WBC, and platelet counts as well as their haemoglobin levels were significantly lower than those of the controls group.

### 1.11.4 Welfare Programmes for Beedi Workers

*Barman and Sarkar (2022)* made an effort to illustrate the accessibility of labour welfare services of female beedi workers in Cooch Behar district of West Bengal. To ensure that these women workers' fundamental social needs are met, the Indian government and the state of West Bengal have implemented a number of assistance programmes. However, their illiteracy and poverty, as well as their backwardness and lack of administrative transparency, seem to be major obstacles to female beedi workers accessing welfare programmes.

*Bhattacharya and Bhattacharya (2000)* have examined how manufacturers continuously find ways to avoid registering workers while increasing wages in the book „„A Study on the Beedi Industry in India"". In response to the sit-in, the government declared that enrolment in welfare programmes would have been possible using identity cards issued by local governments, welfare commissioners, or other offices working to implement the Beedi Workers Welfare Fund, even though the process of issuing identity cards was taking a long time.

*Mishra and Puri (2006)* wrote a book *„Indian Economy"* which deals with the implementation status of social security programmes among the informal sector workers in India. The book reveals that the social security programme has been a jumble of systems covering less than 10 percent of its current workforce in the formal sector, and hence the segment remains unprotected and seldom comes under the scope of any labour legislation.

Concerning the provisions of social security, the author believes that it is extremely difficult to give to the informal economy due to many administrative and financial constraints. The author suggests that the government should prioritize the nation's food security and develop effective plans and strategies for women's employment and every other component of Social Security.

*Rahmatullah et al., (2022)* made a study and the outcome of the study shows that despite all of these laws and programmes, it appears that workers are still being taken advantage of and not benefiting from anything. Because it is clear that the laws that were passed for their benefit contain a number of flaws, the manufacturers easily take advantage of these flaws and evade the law. Despite the fact that a fund was established to provide people with financial security, it has not been successful in achieving this goal because many employees were left out because this Act does not cover all workers.

*Sen (2011)* tried to investigate the barriers in the implementation of regulations and welfare measures to the beedi workers. Significant barriers preventing female beedi workers from accessing benefits revealed to be the contract nature of work, their lack of knowledge about various welfare programmes and the location of medical clinics in remote areas. Due to implementation flaws, many government programmes have been proven to be useless. The high rate of female beedi workers' illiteracy is another barrier to their ability to seek benefits. As a result, concerns have been raised about whether beedi employees are actually covered by various welfare plans and legal requirements. He concluded that the employees need to organize so that they can stand for and protect their interests.

### 1.11.5 Problems Faced by Beedi Workers

*Dharmalingam (1993)* has investigated the working environment of female beedi employees in South India. Author has explored the working conditions of women in a non-agricultural business, beedi production, in this paper. Beedi industry gives women full-time employment and some economic independence. However, it comes at the expense of economical and sexual exploitation, as well as being exposed to a number of health risks. Furthermore, the exploitative nature of beedi production has arisen to disputes at both the household and societal levels.

Study conducted by *Hossain (1998)* in Southern Andhra Pradesh has specifically investigated the exploitation of working children in the beedi sector. He noticed that children were working in both their houses and the factory in the beedi sector. These children frequently

work as assistants to adult workers, and their wages contribute to their family income. He noticed that the working conditions are deplorable. The children are working in gloomy, dismal conditions for lengthy periods of time, resulting in illness and malnutrition.

*Mishra (2014)* discussed about the problems of girl child in beedi industry in Sambalpur and Jharsuguda. Beedis are in great demand on the domestic market, although they are hardly ever exported. The backbone of this industry is the home-based workforce, which consists primarily of girls and women. Parents provide this risky task to young girls because they can make beedis sooner than adults owing to their soft, nimble fingers. This is the principal cause of the unchecked rise in the employment of girls in the beedi-making industry at the expense of their education and wellbeing.

*Palande (2019)* has stated that women workers in the unorganized sector face considerable stress and are exploited in his doctoral thesis. According to the author, women workers who are the major bread earners for their families are most impacted by the unpredictable income from beedi rolling. The author noted that they are hampered by the need to support their families' incomes and the fact that their needs are not being met by the government or their employment.

*Satpathy, Patnaik, & Tripathy, (2009)* examined the challenges of women workers in the unorganized sector in light of Social Security inadequacy in their paper. The research was carried out in the Behrampur of Orissa state. The authors discovered that the obstacles faced by women workers in the unorganized sector are multifaceted. Authors have also noted that the huge family size is the most significant source of poverty when comparing them to accepting a job, regardless of the income. Aside from these factors, illiteracy among the enormous number of employed women is to blame for their stagnation, exploitation, suffering, and poverty. Furthermore, women workers are exploited both at work and at home. According to the authors, the majority of employed women are unaware that they are being exploited.

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