



**ASSESSING THE LIVING AND WORKING CONDITIONS OF BRICK KILN
WORKERS IN BHAKTAPUR DISTRICT**

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A Dissertation

Submitted to

Kathmandu University

School of Arts

In Partial Fulfillment of the Requirement for the
Degree of Bachelor in Community Development

October 2023

APPROVED

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By signing, I certify that the paper titled “Assessing the Living and Working Conditions of Brick Kiln Workers in Bhaktapur District” is entirely original with no previous submissions to academic institutions for different degrees.

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ACKNOWLEDGEMENT

I would like to take this opportunity to acknowledge the efforts and contributions of several individuals and institutions who have played a significant role in the completion of this report, which has been prepared to fulfill the partial requirements for the degree of Bachelors in Community Development (BCD) at Kathmandu University. For this I would like to acknowledge the effort of Kathmandu University for providing us with the platform to undertake this research project as part of our program which allowed us as an undergraduates students an opportunity to apply theoretical knowledge we acquired in the practical environment.

I would also like to express my gratitude to the Kathmandu University School of Arts and Brigham Young University for creating an outstanding learning environment that facilitated the execution of this study. The resources and support provided by these institutions have been invaluable in shaping the course of my research.

First and foremost, I wish to convey my deepest appreciation to my supervisor, Mr. Megh Raj Dangal, along with Dr. Andrew South and Dr. Clifton Farnsworth for their invaluable guidance, constant encouragement, and insightful feedback throughout the research process. Their expertise and support were instrumental in shaping the direction of this study. This research would not have been possible without their endless guidance and experience.

Further, I am grateful to the participants who generously dedicated their time and willingly shared their experiences, making this research possible. Their contributions were crucial in gathering the necessary data and insights to achieve the objectives of this study.

A special note of thanks goes to my family and my friends, Phobi, Sangina, Bikesh, and my friends from Brigham Young University. Your insightful discussions, constructive suggestions, and unwavering encouragement have enriched this research endeavor.

ABSTRACT

The brick kiln sector in Nepal is a highly labor-intensive informal sector and often employs temporary laborers from economically disadvantaged groups and underdeveloped regions. These workers are exposed to harsh and hazardous living and working conditions. In Bhaktapur District, these conditions are particularly challenging, and requires a comprehensive study to address the issues faced by the brick kiln workers. The general objective of the study was to understand the living and working situations of brick kiln workers in Bhaktapur, which involved looking into various aspects, including the work environment, safety precautions, working hours, pay, and job satisfaction in the kilns. Additionally, the study aims to inspect the living conditions provided to workers, including housing, cleanliness, water access, and basic amenities. Through a comprehensive examination of these factors, the study aims to identify the challenges experienced by brick kiln workers and identify potential areas for intervention and improvements.

Primary data was collected using structured questionnaires and observation checklists through which vital insights were gained into their demographics, work patterns, wage structures, and access to basic amenities. 47 brick kiln workers (both male and female) from three brick kilns of Bhaktapur (Swet Bhairab Fixed Itta Udyog, Saraswati Fixed Itta Udyog, and Shree Saraswati Fixed Chimney Brick Factory) were sampled for data collection. The study was quantitative in nature. Descriptive- explorative analysis was used to describe the socio-economic aspect of labors and explore living and working conditions trends of labors in brick kilns of Bhaktapur. The collected data was tabulated, calculated and analyzed using SPSS and MS- Excel.

The finding of the study revealed substandard conditions characterized by extended daily work hours and financial difficulties, poor living conditions, occupational hazards and safety concerns within the brick kiln premises. Despite facing exploitative practices and lacking basic amenities, surprising 58% of workers expressed satisfaction, due to the minimal necessities provided in the kiln in comparison to their hometowns and were attracted to the financial prospects it offered, especially for those with limited marketable skills.

Overall, the study sheds light on the harsh realities of brick kiln workers' lives and work conditions, emphasizing the need for improved regulations and better practices within the brick industry.

Keywords: Bhaktapur, Brick Kiln, Living condition, Working Condition, Workers

Table of Contents

APPROVED	ii
DECLARATION	iii
ACKNOWLEDGEMENT	v
ABSTRACT.....	vi
LIST OF TABLES	x
LIST OF FIGURES	xi
GLOSSARY	xii
LIST OF ACRONYMS/ ABBREVIATIONS	xiii
CHAPTER I.....	1
INTRODUCTION	1
1.1Background.....	1
1.2 Statement of the problem	2
1.3 Objective of the study	3
1.3.1 General Objective	3
1.3.2 Specific Objective.....	3
1.4 Research Questions	3
1.5 Significance of the Study	3
1.6 Limitations of the Study.....	4
1.7 Organization of the Report.....	5
CHAPTER II.....	6
REVIEWS OF LITERATUIRE.....	6
2.1 Introduction.....	6
2.1.1. Contextualizing Nepalese Brick Kilns	6
2.1.2 Theoretical Review	8
2.1.3 Review of Related Studies	11
2.1.4 Policy Review	14

2.2 Conceptual Framework	20
CHAPTER III	21
Research Methodology	21
3.1 Research Design.....	21
3.2 Study Area	22
3.2.1 Background of the selected areas	22
3.3 Population and sample of the study	25
3.3.1 Sample Size.....	25
3.3.2 Sampling technique.....	25
3.4 Data Collection Procedure	27
3.4.1 Data collection tools.....	27
3.4.2 Site visit and pre-test.....	27
3.4.3 Data collection	28
3.5 Data Analysis Procedure	28
3.6 Ethical Consideration.....	29
CHAPTER IV	30
RESULTS	30
4.1 Introduction.....	30
4.1.1 Demographics	30
4.1.2 Living and Working Condition	38
4.1.3 Facilities Provided by the Factory	39
4.1.4 Physical Environment of Brick Kilns in Bhaktapur.....	44
CHAPTER V	51
FINDING DISCUSSION AND CONCLUSION	51
5.1 Introduction.....	51
5.2 Summary	51
5.3 Discussion.....	55
5.4 Conclusion	56
5.5 Input, Output and Outcomes	58

References.....	63
APPENDIX A: Consent form.....	67
APPENDIX B	68
APPENDIX C	69
APPENDIX D.....	80

LIST OF TABLES

Table 1: Demographic Characteristics	30
Table 2: Age – Gender Crosstabulation.....	31
Table 3: Religious Composition of Workers	32
Table 4: Caste Composition of Workers.....	32
Table 5: Education Status of the Workers	33
Table 6: Gender and Educational Status Crosstabulation.....	33
Table 7: Education Qualification of the Workers	34
Table 8: Gender and Marital Status of Workers Crosstabulation	35
Table 9: Family Size	36
Table 10: Work Status and Place of Origin	36
Table 11: Composition of Workers by the Place of Origin	37
Table 12: Distribution of Brick Kiln Workers by Gender of the Household Head	38
Table 13: Distribution of Workers According to their Marital Status and No. of Children	39
Table 14: Residential status of Workers	39
Table 15: Distribution of Workers on the Basis of Years Lived in the Residence	41
Table 16: Distribution of Brick Kiln Workers by Monthly Income.	44
Table 17: Distribution of Brick Kiln Workers Household by Family Monthly Income	45
Table 18: Categories of Worker According to their Working hours and Earnings	46
Table 19: Level of Job Satisfaction	48
Table 20 : Job Security	49
Table 21: Distribution of Brick Kiln Workers by Discrimination and Abuse	49
Table 22: Distribution of Brick Kiln Workers by Savings they make in any Financial organizations.	50

LIST OF FIGURES

Figure 1: 8-8-8 Balance Model	19
Figure 2: Schematic diagram of conceptual framework	20
Figure 3: Geographical area of Swet Bhairab Fixed Itta Udyog	23
Figure 4: Geographical area of Saraswati Fixed Itta Udyog, and Shree Saraswati Fixed Chimney Brick Factory	24

GLOSSARY

Brick Kilns	: Industry where bricks are made by baking clay in high-temperature ovens with chimneys
Seasonal Migrants	: People who move at brick kilns during specific season
Industry Quarter	: Housing provided to workers, located within or near the industry site, offered to workers at no charge for their stay
Naike	: Nepali word designated to middleman facilitating connections between laborers and employers in brick kilns, involved in recruitment processes
Economically disadvantaged groups	: Marginalized communities or individuals lacking access to education, healthcare, basic amenities, financial resources and face barriers to economic opportunities
Housing Condition	: Quality, suitability, and adequacy of housing accommodations provided, considering factors such as space, ventilation, amenities, occupancy, and arrangements
Sanitation Facilities	: Availability of clean toilets and access to clean water, with safe and private washing area
Basic Amenities	: Essential need such as food, clean drinking water, electricity, shelter, and healthcare services, accessible to individuals
Health and Safety	: Measures to protect and promote the physical well-being and safety of workers, including medical insurance and first aid resources.
Work Environments	: Workplace environment and physical conditions including safety measures, ventilation, lighting, exposure to hazardous materials, noise levels, comfort, and overall atmosphere
Employment Condition	: Wages, working hours, job roles, workload, contractual agreements
Discrimination and Abuse	: Unfair treatment wage disparities and verbal mistreatment.
Marginal Productivity	: Additional output that is achieved by employing one more worker

LIST OF ACRONYMS/ ABBREVIATIONS

BK : Brick Kiln

LWCs: Living and Working Conditions

PPE: Personal Protective Equipment

SPSS: Statistical Package for Social Science

n = sample size

FCAN: Federation of Contractors' Association of Nepal

SDG: Sustainable Development Goals

CHAPTER I

INTRODUCTION

1.1Background

The study of brick making is said to be the study of civilization because brick, which is made up of clay, has been used for thousands of years that uplifted development (Sashananda , Thygerson , Khanal , & Joshi , 2016). The making of brick was started in Nepal since a very early age as a part of art and architecture (GEFONT, 2007). The brick kiln industry plays an important role in Nepal's construction sector, contributing significantly to economic growth and infrastructure development. In Nepal, the construction industry accounts for 10-11% of the national GDP, as reported by the Federation of Contractors' Association of Nepal (FCAN) (Bajracharya, Gurung, Mathema, Sharma, & Mishra, 2021). Presently, there are over 400,000 people that are engaged in work in the brick industry in Nepal (GEFONT, 2007). There are almost 1000 of brick kilns that are being operated in Nepal and employs approximately 1.5 million workers, which has the production capacities ranging from 15,000 to 50,000 bricks per day in 2016 ((FNCCI), 2015). However, brick-kiln (BK) sector remains an informal sector due to the seasonality of the work and the use of informal low-skilled labor. (Bajracharya , et al., 2022).

Nepalese brick kilns still use traditional methods and technologies for brick production, which heavily depends on labor-intensive practices, often overshadowing the harsh living and working conditions endured by seasonal brick kiln workers, notably in places like Bhaktapur District (Silpakar & Gurung , 2022). During brick making season the demand of labor is met by recruiting internal and regional migrants belonging from economically disadvantaged groups who reside in or near the brick factory including male and female working alone or along with their families. As brick kiln are informal sectors workers face issues related to poor working and living conditions and are exposed to various occupational safety and health hazards (long working hours, poor working and living conditions, labor intensive process, exposure to harmful pollutants, and employment without contract), it also prevents them from receiving the wage determined by the government. Moreover, these workers face wage disparities, with female workers being particularly disadvantaged due to their engagement in physically demanding roles (Silpakar &

Gurung , 2022). Despite challenges, these workers play a crucial role in producing bricks, which are fundamental for societal advancement.

Nepal's development journey has showcased remarkable progress, yet certain sectors, such as the brick kiln industry, highlight the need for further attention to ensure equitable and sustainable progress. The Sustainable Development Goals (SDGs) established by the United Nations provide a framework that recognizes the importance of good health and well-being, decent work, economic growth, and industry innovation. SDG 8 is directly related to brick kilns as it emphasizes providing decent work, ensuring economic growth, and improving labor conditions. Similarly focuses on building resilient infrastructure, promoting inclusive and sustainable industrialization, whereas SDG 3 directly deals with good health and well-being ensuring better living conditions contributes to improved health and well-being (SDGs Report, 2023).

Workers in brick kiln of Bhaktapur District are facing numerous problems, regarding their housing, health and work. This study wants to understand their lives better and how they work and provide valuable insights to relevant authorities working towards sustainable development and social justice.

1.2 Statement of the problem

The current living and working conditions of brick kiln workers requires immediate attention. Brick kiln workers form a significant part of the informal labor force in developing countries. Workers are compelled to labor in harsh working conditions that include monotonous long hours of strenuous manual labor and exposure to hazardous chemicals and materials with limited access to basic amenities. The high level of unemployment and poverty have left individuals with no alternative but to rely on the informal economy as their only source of income-generating work, these conditions perpetuate a cycle of poverty and vulnerability for laborers, trapping them and their families in a precarious existence (ILO, 2003). Workers' living conditions include substandard housing with inadequate sanitation facilities and minimal access to healthcare and safety services. Specific difficulties and problems must be addressed to improve well-being of the workers. Despite existing research, a gap in presenting a holistic understanding of the living and working conditions of brick kiln workers remains.

The problem at hand is to comprehensively assess the living and working conditions of brick kiln workers and to understand the dependency between owners and labor. This study aims to address these gaps by critically examining the living and working conditions of brick kiln workers, including housing conditions, occupational health, safety measures, working hours, wages, and access to basic facilities. By examining these factors, this study seeks to identify the challenges faced by brick kiln workers and potential areas where interventions and improvements can be made to improve their overall living and working conditions.

1.3 Objective of the study

1.3.1 General Objective

1. To assess the workers' living and working conditions in brick kilns of Bhaktapur

1.3.2 Specific Objective

1. Investigate the working environment and potential hazards in brick kilns to identify existing safety measures.
2. Evaluate the working hours, wage, payment system and work satisfaction in brick kilns.
3. Examine the living conditions provided to the laborers, such as accommodation, sanitation facilities, access to clean water, and availability of basic amenities.

1.4 Research Questions

Some fundamental questions that need to be explored in connection with brick kiln laborers are:

1. What is the present working and living condition of workers in brick kilns of Bhaktapur, and how do these conditions impact their overall well-being and quality of life?
2. What is the availability of facilities provided to brick kiln workers, and its impact on their working conditions, productivity, and overall job satisfaction?
3. What are the main challenges and problems faced by brick kiln workers in their job?

1.5 Significance of the Study

Brick kilns in Bhaktapur have historically provided employment opportunities to underprivileged men and women. Due to poverty, unemployment, and a lack of facilities in the rural sector, a large number of people relocate to urban areas, most of which migrate in search of decent work (SDG 8). However, in reality, they are often exploited and deprived of education (SDG 4), recreation,

and other basic necessities. Very few studies have dealt with brick kiln workers' living and working conditions; therefore, it is important to understand their present situations and recognize their problems. The importance of this study is to determine the present WLCs, their wage levels, health and safety, working environment, and employment conditions of the workers involved in the brick kiln sector for their living.

It is very important to study workers' roles, conditions, and the adjustments they make in a new setting. Workers' LWCs are one of the burning issues in third world countries, including Nepal, where they are overworked and underpaid, working long hours from morning to evening.

The study explores the status of laborers in brick kilns and the overall situation of workers employed and provides reliable information to relevant stakeholders and researchers. This study is important to all those who are concerned with the level of facilities provided for the workers in Brick Kilns of Bhaktapur. This study explores the potential correlation between individuals' illiteracy and economic challenges leading individuals to seek work in brick kilns.

1.6 Limitations of the Study

Limitations of the study include the constraints that the researcher faces at the time of conducting an in-depth analysis of a particular subject matter.

The main limitation of this study was the sample size. It did not cover all the workers as data collection was conducted during the off-season, when many workers had already migrated to their homes, outside of the kiln's municipalities. The samples were taken from brick kilns in Bhaktapur. This may have affected the conclusions of this study.

The result focused on the small sample size (remaining workers) of three brick kilns in Bhaktapur, which may limit the generalizability of the findings to the border population of brick kiln workers. Findings and conclusions were based on self-reported information from the workers, which may be biased or manipulated as the workers may feel reluctant to report negative conditions due to fear of reprisal, or they may overstate their condition to draw attention to their unfortunate or inconvenient situation. Such bias can affect the validity and reliability of the findings. This study focuses on specific aspects of living and working conditions, such as wages, working hours, and occupational health and safety. In addition, this study was limited to quantitative methods. Only descriptive statistics were used to analyze the collected information.

1.7 Organization of the Report

The research has been organized into five different chapters as follows:

Chapter I is the introduction of the research which consists of background of the research, problem statement, objective of the study, significance and the limitation of the study.

Chapter II provides extensive research reviews including reviews of literature. This chapter communicates an overview of conceptual framework.

Chapter III details the research methodology, research design, nature and source of the data, data collection procedure, data analysis techniques as well as reliability and validity analysis.

Chapter IV is a vital part of the study. This chapter details the results of data presentation and analysis. Data are presented in tabulated form and analyzed per the results.

Chapter V deals with the findings, discussion and conclusion drawn by the research study. The summary of the research is based on the major findings and the conclusion provides discussion based on the interpretation of the data for the purpose of solving the research problem.

CHAPTER II

REVIEWS OF LITERATURE

2.1 Introduction

In this chapter, relevant literature relating to the brick kilns living and working conditions are discussed. The review of literature has been categorized into five sections. The articles were reviewed from primary sources pulled from national and international papers. The chapter ends with the presentation of the conceptual model that guided the study.

2.1.1. Contextualizing Nepalese Brick Kilns

In Southeast Asia, brick kiln industries are responsible for 86.20% of total brick production. As per (Halder & Patra , 2021), 1500 billion bricks are produced globally per year, and Nepal contributes 0.47% of total brick production in the world by engaging approximately 1,40,000 people within the brick sector. The brick kiln industry contributes 2% of the national GDP as per the reporting from (ICIMOD, 2019).

The production of brick was started in Nepal since a very early age as a part of art and architecture (GEFONT, 2007). Bricks are considered the primary construction material, especially inside Kathmandu Valley. The demand of brick production in Nepal has continued to skyrocket since the 2015 earthquake as extensive post-earthquake reconstruction work was required (Bajracharya, Gurung, Mathema, Sharma, & Mishra, 2021). Similarly, one-fifth of the country's population is already living in urban areas and in coming years this proportion is expected to increase, thus pressurizing the brick industries to produce more bricks to meet the climbing demand of housing construction (Bajracharya , et al., 2022). As a result, establishment of brick kilns is accelerating. There are over 1,40,000 males and females that are engaged in work in the brick industry in Nepal (Halder & Patra , 2021) and almost 1000 brick kilns that currently operating with production capacities ranging from 15,000 to 50,000 bricks per day. ((FNCCI), 2015).

The brick kiln sector is one of the oldest unorganized labor-intensive informal sectors due to the seasonality of the work and the use of informal low-skilled labor (Bajracharya, Gurung, Mathema, Sharma, & Mishra, 2021). As the brick sector is informal and requires low skilled labor the demand for workers during the production season is high, attracting workers to engage in brick production from various parts of the country as well as from India. In developing countries due to limited

social security provisions, employment is considered “unaffordable” for many due to low wages, informal labor arrangements limited access to education and healthcare. These factor collectively strain individuals and families financially. People must engage in some sort of economic activity to sustain themselves. This partially explains the importance of the informal economy, as the “workplace of last resort” for workers who would otherwise be unemployed (Cazes & Verick, 2013).

The technologies adopted by the brick kiln in Nepal are still outdated. Every production work is manually conducted and requires physical labor. As the production of bricks is seasonal in nature, it operates for a maximum of six months from December to June (*Poush to Jestha*). Before the season starts recruiting an essential process within the brick sector begins. The scouting for the workers starts between August and September (right before the festival season which is Dashain and Tihar), where the contractors often referred to as “*naike*”, are responsible for recruiting laborers. They usually travel and target different villages (prioritizing their own village).

Almost half of the population of the far-western and mid-western development regions migrate every year seasonally in search for work due to poverty and food insecurity (Sherpa , 2010). Although the operational process of brick manufacturing starts from November, the scouting and contracting of laborers starts as early as August, where “*naike*” or the recruiting agent accepts a deal with the kiln owners regarding the number of labors to be provided for the season. Usually, individuals are recruited who are poor and unable to go to India or abroad for work (Karki , 2020). As certain amount of advance money is handed to the individuals who are willing to work (Sharma & Dangal , 2019). From a psychological perspective, workers accept the offer without considering the consequences of working under the given terms and conditions because they subconsciously view only the benefits of the advance amount; therefore, the workers are trapped in a cycle of poverty through bonded conception labor force, which is a modern form of slavery (Halder & Patra , 2021). The advance received for their labor is then spent in celebration of upcoming festivals. At the close of the festive seasons, the workers migrate alone or with their families to work in the kiln, unaware of the reality ahead (Sharma & Dangal , 2019).

Through these schemes, the informal brick sector generates large numbers of employment for the illiterate, economically disadvantaged communities who lack access to education, healthcare, basic amenities and have a low level of income. The work division is mainly done on the basis of gender;

primarily females are involved in stacking, molding and shaping the bricks while men are usually engaged with firing and transporting works (Halder & Patra , 2021). The workers are compelled to live on-site as they typically cannot afford rented places. It is very common for workers to construct their own huts from bamboo, unbaked green bricks, and tins that become low ceilings. They are informed to construct temporary shelters within the given area. As the huts are self-constructed accommodations, consisting of no windows with one door resulting in a lack of ventilation, the sizes of the rooms are often small and conditions are cramped, but still the members of the household are compelled to adjust. Access to electricity, lighting, water supply, toilet facilities and other housing facilities such as cooking, and storage areas were limited (Dangal , Sharma , & Bartula , 2021).

2.1.2 Theoretical Review

This study titled “Assessing the Living and Working Conditions of Brick Kiln Workers in Bhaktapur District” is related to Marxist Theory of Dependence. The Marxist perspective in sociology argues that there are inequalities based on social differences in which workers are dominated by the ruling class (Marxism, 2015). There are two classes in capitalist society. The bourgeoisie and the proletariats who are dependent upon each other. The bourgeoisie are the people of middle-class (between the very poor and the super-rich). They own the means of production, earn the most profit from businesses and pay wages to their workers. The proletariat are the breadwinners, people who earn wages for living and rely heavily on manual, daily or casual labor. The relationship between these two classes is not a relationship of equality rather, it is a relation of exploiter and exploited, oppressor and oppressed (K.C , 2073). In this study, the BK owners can be recognized as the bourgeoisie and the workers as the proletariat. Class differences can also be seen in BK industries where the owners (bourgeoisie) are in a higher position and the workers (proletariat) are in a lower position. Unequal power relations can also be witnessed in BKs of Bhaktapur. Despite the mutual dependence upon each other, because of workers’ lack of consciousness and bargaining skills they are commonly dominated and exploited by their owners. They fail to recognize that exploitation is a process that occurs over time, rather than a single event.

Dependency perspective

Dependency Theory is a theoretical framework often used to analyze the relationship between developed and developing countries, with a particular focus on the economic and power dynamics

that create and perpetuate inequalities. The theory can provide insights when adapted to micro-level contexts such as the brick kiln industry. Dependency theory can provide a useful framework for understanding the living and working conditions of brick workers, especially in the context of Nepal as a developing country. As the theory emphasizes the dynamics of unequal power and economic exploitation, it can help shed light on the challenges faced by brick workers.

Dependency theory highlights the imbalance of power between the core and the periphery. The economic, political, and other aspects are controlled by the core (owners) while labor remains in continuous circulation at the periphery. In the case of BKs, exploitation takes place through low wages, long working hours, lack of legal protections, and unsafe working conditions. Workers are stuck in a cycle of poverty due to their dependence on these jobs and their lack of alternative opportunities.

According to dependency theorists, the challenges faced by labor are not due to their inherent backwardness, but rather a result of exploitation. The laborers are exploited but they are unaware of how their work environment should be or the facilities they must receive. The concept being discussed is that the unequal development in society is a result of the historical relationship between capitalism and labor forces, which involves the exploitation of labor (K.C , 2073).

This study demonstrates the dependency relationship between owners and workers. The workers are dependent on their owner. The core (owners) exploits the periphery(workers) and gets most of the profit and benefit, while the workers depend on their income and from labor. In the case of BKs in Bhaktapur the dependency relation is evident among three main actors: the owner, recruiter (“*naikey*”) and the workers. Naike have strong bargaining power because both the laborer and kiln owners heavily depend on them (Sharma, et al., 2019)

Labor Economics Theory

The labor economy theory provides a valuable framework for understanding the different labor dynamics in the brick kiln industry in Nepal. It focuses on the interactions between workers, employers and the labor market, and provides insights into how wages, working conditions and employment policies are determined

Labor markets can also be referred to as employment markets (Kenton , 2023). Like all the other markets, labor markets have demand and supply chains. (Greenlaw, Shapiro,, & MacDonald, The

Theory of Labor Markets, 2022). Labor supply refers to the number of people willing to work, while labor demand refers to the need for labor for production. Laborers bring revenue to the firm. In order for a firm to maximize its profit, it will never pay any worker more (in terms of wages and benefits) to a worker than the value of their marginal productivity (Greenlaw, Shapiro, & MacDonald, The Theory of Labor Markets, 2022). Most of the workers in BK come from vulnerable backgrounds, including rural areas and low-income families. Push and pull factors influence workers' decision to work in BKs. Researchers say that push factors are stronger than pull factors, the reason why people leave a place, or an area (push factor) have greater impact than the reason they are attracted to another place (pull factor). The push factor is primarily the difficulties in rural areas, not the attractions of cities, which have the most significant influence on population migration (Kainth & Singh, 2010). On the other hand, there are pull factors that influence workers to work in BK such as wage levels, working conditions, new employment opportunities, and the availability of social security. Existing research on labor markets has also revealed that better living conditions are considered as major pull factors to attract labor from underdeveloped areas, as the labor economy theory also predicts that an increase in wage or better living and working conditions could attract more workers to the industry (Kainth & Singh, 2010).

The demand for labor in brick kilns is influenced by various external factors, such as fluctuation in construction demand, infrastructure projects, economic changes and adoption of new technology. New technology advancements where automated brick-molding machines are available but require investment up to eight million rupees which is a significant amount of investment (ILO U. C., 2020). Technological advancements may also affect brick production and labor demand as these machines can do the work of 100 laborers, yet employers prefer workers to mold green bricks by hand as they have high demand in the market that maximizes more profit without any investment. Labor economics theory suggests that changes in these factors can lead to changes in the demand for brick kiln workers.

Wage determination is a central concept in labor economics. The brick industry is a competitive labor market where there is no direct competition in hiring. As BKs are an informal sector if the workers want a job, they must accept the offered wage rate. Demand for workers and work is high so workers are exploited accordingly. (Greenlaw, Shapiro, & MacDonald, Wages and Employment in an Imperfectly Competitive Labor Market, 2022)

2.1.3 Review of Related Studies

Working and living conditions in brick kilns have a significant role in enhancing the productivity of the workers. According to the study conducted by (Bajracharya , et al., 2022), for every increase of one workplace amenity, there is a 2% increase in brick kiln productivity and healthy workforce in a season. This reveals that improving workplace amenities can positively impact the productivity of BKs. However, the increase in productivity and healthy workforce solely depends upon owners' awareness and willingness to improve and provide better WLCs in the factory. On the other hand, workers must also be accountable for maintaining a decent and safe working/living environment. (Bajracharya, Gurung, Mathema, Sharma, & Mishra, 2021)

Living conditions are important for brick kiln workers as they significantly impact their well-being, health, and overall quality of life. BK workers often face challenging and harsh working environments, and their living conditions can either exacerbate or alleviate these challenges. The recruiters "*naike*" are also to blame for laborers' poor living and working conditions as they are in charge of managing the relations and LWCs of the workers. The bargaining power of "*naike*" can change the working and living conditions of the workers. The reason why the bargaining power of the "*naike*" is so high is because of their significant role in recruiting agents from Nepal and India (Mathema , Bajracharya , Gurung , & Sharma , 2018). They usually receive a commission on top of their monthly salaries, and if they feel unsatisfied or unhappy, they can simply take their workers to other kilns. This indicates that job security does not exist for the BK workers as they are not provided with any written contract or agreement, putting them in an informal work setting.

Brick production is a seasonal business, where large number of workers migrate from their home village to the brick kilns. Migrants are usually farmers who migrate to the BK for work once the harvest season concludes (Shrestha & Thygerson, 2019). BK workers often live in inadequate and overcrowded housing. The workers and their families live on the kiln premises throughout the brick-making season. They are responsible for making their own huts "*Jhyauli*". They have no good accommodation and sanitation facilities, due to their temporary nature, the place where they are living does not have any access to electricity, water supply lines and other housing or basic amenities facilities. Throughout the brick-making season they live in cramped conditions in their small self-constructed huts. The land provided to them is utilized to grow rice during off seasons, therefore the place where they sleep is naturally damp. The temperature inside as well as outside

their huts can vary from extremely warm during the daytime to exceptionally cold during the evening, particularly throughout the winter months (Daly , Hillis , Shrestha, & Shrestha , 2020). (Sathha & Athena , 2013) analyzed the socioeconomic status of brick workers in Coimbatore. The living conditions of the BK workers were very basic and substandard. The study suggests that by increasing the access to microfinance organizations BK works can be empowered and their exploitation can be avoided. A study conducted by (Chawada, Gharat, Bansal, & Kantharia, 2012) reveals that workers were living in very poor and unhygienic conditions. Workers were not provided with any facilities such as toilets at the workplace and were not provided with any paid or unpaid leave for any health-related issues or medical treatments. The study results highlight that owners of brick kilns do not provide basic amenities and therefore, workers live in very adverse and very poor living conditions with no alternative.

Workplace environment is significant for a worker, as one-half of working hour is spent at workplace, it determines quality and productivity of their work. (Gahlot , Rana , & Singh , 2020) explains the importance and impact of workplace that is physically and emotionally safe. The author expresses that brick kiln workers are considered as excluded workers in the society as they are constantly abused to work under intense work demands for higher production, but when it comes to workplace environments and facility they are deprived of fair and timely wage, job security, social benefits (leaves) workplace safety, basic amenities, welfare facilities, childcare and health insurance. The study suggests the living and working conditions of brick kiln workers can only improve when they are provided with basic amenities. Additionally, the kilns should also prioritize workers' health and availability of medical insurance including medical assistance and first aid kits (Bajracharya , et al., 2022). In Nepal, larger brick-kilns with better investments in technology and mechanization were more likely to prioritize improvements in WLCs compared to smaller brick-kilns with limited financial resources. The study suggests that a combined focus on enhancing WLCs and adopting cleaner technology can contribute to a healthier and socially responsible brick-kiln industry.

Bajracharya, Gurung, Mathema, Sharma, & Mishra (2021) studied the decent working and living condition of brick factory workers and conducted rapid need assessment in five provinces of Nepal for which purposive sampling was adopted. The action research study addresses the main issue and challenges to promote decent living and working conditions for the brick factory workers

through action research. The study revealed that, firstly the earning solely depends on the nature of task that the male and female workers are involved in. The payment is highly dependent on their task. For instance, the molders and the transporter were paid according to the number of bricks they were able to mold or transport. The payment procedure in the brick kilns is determined on a 'per brick' basis; the more bricks they make or carry, the higher the payment they earn. This made them work more hours to earn enough. The workers also feel pressured to work through verbal abuse. Secondly, workers had a lack of health and occupational safety knowledge. The report suggests that the owner of the brick factory must be aware and willing to improve the living and working conditions of the factory whereas workers must also be aware and responsible for maintaining a decent and safe working/living environment. Improving workers' LWCs, by providing facilities such as Occupational Health and Safety, Childcare and Education for Workers' Children, Accidental/Medical Insurance not only benefits the workers but also benefits and profits the industry through a productive and healthy workforce.

Extremely bad working and living conditions alone do not prove the existence of forced labor because sometimes unfortunately people/ workers "voluntarily" accept the bad living and working conditions because they are unskilled and lack alternative job opportunities and skills. (ILO Indicators of Forced Labour). Regardless of poor living and working conditions in kilns, workers acknowledged basic amenities such as water, fuelwood, and electricity provided by the industry, which contrasted with the complete lack of basic services in their home districts. (Mathema , Bajracharya , Gurung , & Sharma , 2018).

The existing literature on the living and working conditions of brick kiln workers in Nepal lacks comprehensive and up-to-date studies that provide a holistic understanding of their situations. The article "Do working and living conditions influence brick-kiln productivity? Evidence from Nepal" points out the insufficient attention on the impact of working and living conditions (WLCs) of workers in brick kilns. Many other studies have mentioned the gap in exploring the social pressure and economic condition of the workers. Therefore, to bridge this gap, the study "Forgotten Contributors in the Brick Sector in Nepal" suggests that to understand the current condition and state of the workers, it is essential to engage various stakeholders and brick entrepreneurs as by engaging mutual parties in sustainable improvements in workers living working and overall-

wellbeing can be achieved in a holistic manner (Bajracharya, Gurung, Mathema, Sharma, & Mishra, 2021)

2.1.4 Policy Review

The Nepalese government has executed labor policies 2048, 2062, and 2074 along with labor policy guidelines 2050 guideline to exercise labor rights and provide various benefits to the workers. These rules are significant to provide fair treatment, protection and benefits to Nepalese workers (Dangal , Sharma , & Bartula , 2021)In Nepal, there are neither laws nor regulations that specifically target the brick industry (MinErgy, 2017). Brick industries in Nepal are governed by policies which have interconnection between various acts, laws, rules and regulation which have been implemented by the parliament and the government of Nepal. The Labor Act 2074 (2017) – the Government of Nepal implemented Labor Rule 2075 (2018) to protect the rights and ensure he well-being of workers in different industries (Nepal Labor Act 2074). This act deals with variety of issues such as workplace and employment conditions, hours of work, wages, safety measures, welfare provisions and labor disputes resolution. The objective of this Act is to provide a comprehensive framework for workers' rights, interests, and safety in Nepal (MinErgy, 2017)

Labor Law Provisions applicable to brick kilns:

- Minors shall not be engaged and employed in any work as to be contrary to law, If found employed, immediately rescues them and take action against the employer.

(Minor is a person who has not completed the age of eighteen years)

- Female may be engaged in work after sunrise and before sunset.
- The workers and employers should not considered to be on reserve during the off-season period. Seasonal enterprises are required to inform the Labor Office about the start and end dates of operations.
- Permanent workers and employers in seasonal enterprises must be paid at least twenty-five percent of their regular remuneration as retaining allowance when the enterprise is closed during off-season.
- If a worker or an employee works more than eight hours a day or forty-eight hours a week, they are qualified to receive overtime wages. However, no worker or employee are forced to work overtime for wages.
- Workers or employee shall not be involved in any task such as lifting, loading or transporting heavy loads that could be physically straining and could cause physical injury or harm to their health.
- Enterprises should conduct compulsory health checkups for the workers or employee once a year where the nature of work adversely affect their health.
- Enterprises where fifty or more females workers and employee are engaged in the work, the Enterprise owner is responsible to provide a designated room (childcare center) for the children of these female workers and employee.

Source: Nepal Labor Act (2074)

Government of Nepal framed Labor Rules 2075(2018) on by Section 184 of the Labor Act 2074 (2018). The rules aim to ensure security of profession and services, remuneration and welfare provisions, health cleanliness and safety in various sectors.

Labor Rule Provisions applicable to brick kilns:

- Provision for compensating workers or employers who gets injured while doing the assigned works. The owner is responsible to compensate the cost of treatment for the injured worker or employee based on the recommendation of the medical practitioner recognized by the Government of Nepal.
- If a worker or employee is severely injured resulting to physical disability while working for the enterprise the owner is responsible to provide compensation amount that is equivalent to their five years remuneration at their current rate if the disability is 100% based on percentage of disability.
- Safety measures must be applied by the workers while engaging in hazardous tasks. Workers shall not be allowed to lift, move or carry loads beyond weightlifting limits prescribed.
- Requirements for workplace health and safety includes, clean and tidy workplace, arrangements consisting adequate supply of fresh air, light and temperature, solid waste management, facility of healthy drinking water, separate bathroom and toilets for male and female.
- Prohibition on discrimination on the grounds of religion, colour, sex, caste, tribe, origin, language, ideological conviction or other similar ground and on the basis of remuneration for equal value of work on the ground of sex.

Source: MinErgy (2017)

“Decent Work” and Time

From the viewpoint of International Labor Organization (ILO) the concept of “decent work” is considered as working time. The aim of this concept is to evaluate working time into five aspects; its impact on health, balancing family and work responsibilities, promoting gender equality, enhancing productivity and empowering workers to maintain control in their working hour and balance life. (Boulin, Lallement, Messenge, & Michon, 2006)

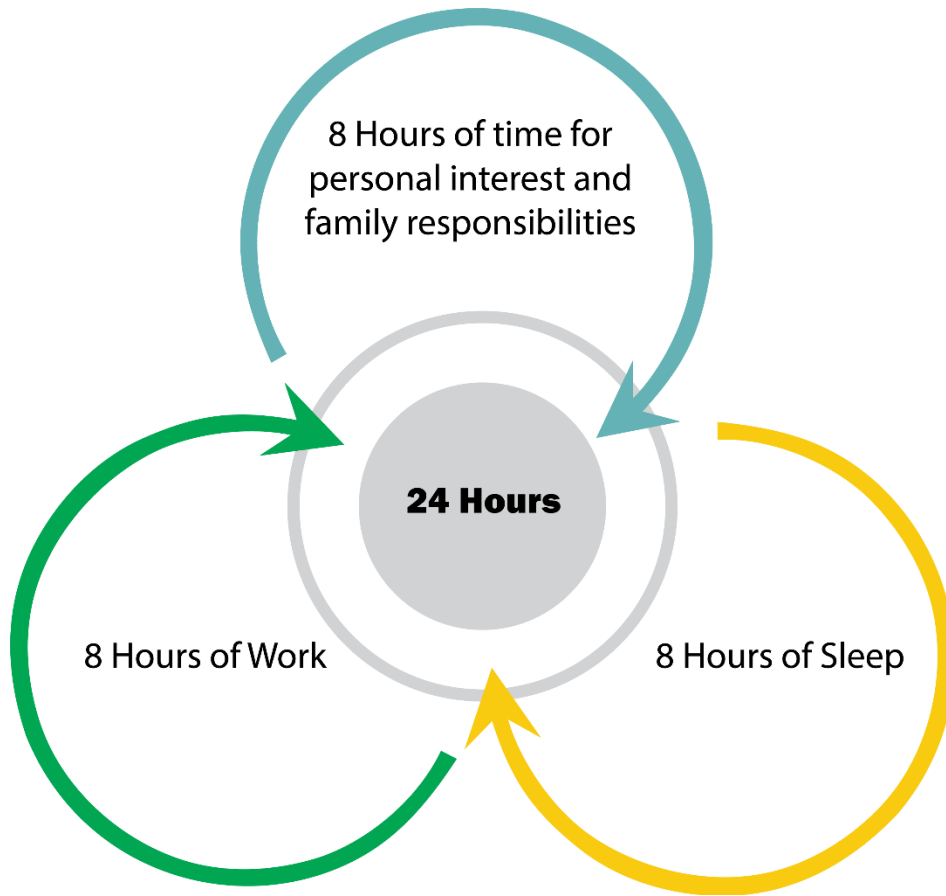
First and foremost, long working hour have negative impacts on workers’ health and those negative impacts are not compensated through financial benefits. Next, working hours actually brings a difference in work-life balance as individuals working fewer hours have the ability to balance work-life compared to those working long hours. Long working hour creates gender inequality and decline in productivity among men and women. In majority of third- world countries, men are considered as breadwinners, as they spend majority of their time working and contributing relatively less to education and domestic tasks such as various responsibilities and chores within the household, such as cooking, cleaning, childcare, and other activities related to maintaining the home and caring for family member. These tasks are considered significant for the overall well-being and smooth functioning of a household, but these roles are traditionally seen as the responsibility of women in many societies. This pattern greatly affects women as they are forced to choose between paid work or household works and raising children through which their productivity delivery in labor market declines. Through individual level perspective, individuals who have achieved higher education and higher paying jobs prefer reducing their working hours whereas, this scenario is completely opposite to less educated workers with lower income. (Boulin, Lallement, Messenge, & Michon, 2006)

“8-8-8 balance model”

Planning and organizing working time has a significant impact on workers productivity, work quality and work stress. It is proven that long working hours do not always leads to increased output, in fact they contribute to workers stress, health issues and more workplace accidents which decreases workers productivity.

The “8-8-8 Balance Model” is associated with ILO that divides a workers day into three equal parts: 8 hours of work, 8 hours of sleep and 8 hours of time for personal interest and family responsibilities. There are certain minimum and maximum limits for working hours according to ILO standards. The standard states that a worker must not work for more than 48 hours per week, with no more than 10 hours per day. Moreover, workers must take at least one day (24 hours) of rest per week and a at least three weeks of paid annual leave per year. The concept of working time is usually divided into 8 hours for family responsibilities and personal interests, 8 hours for sleep, and 8 hours for work.

By following the model, it ensures as high productivity as possible, the risk to workers health and safety is low and the workers will be able to manage time to meet and maintain family responsibilities and personal interest (ILO, 2009).

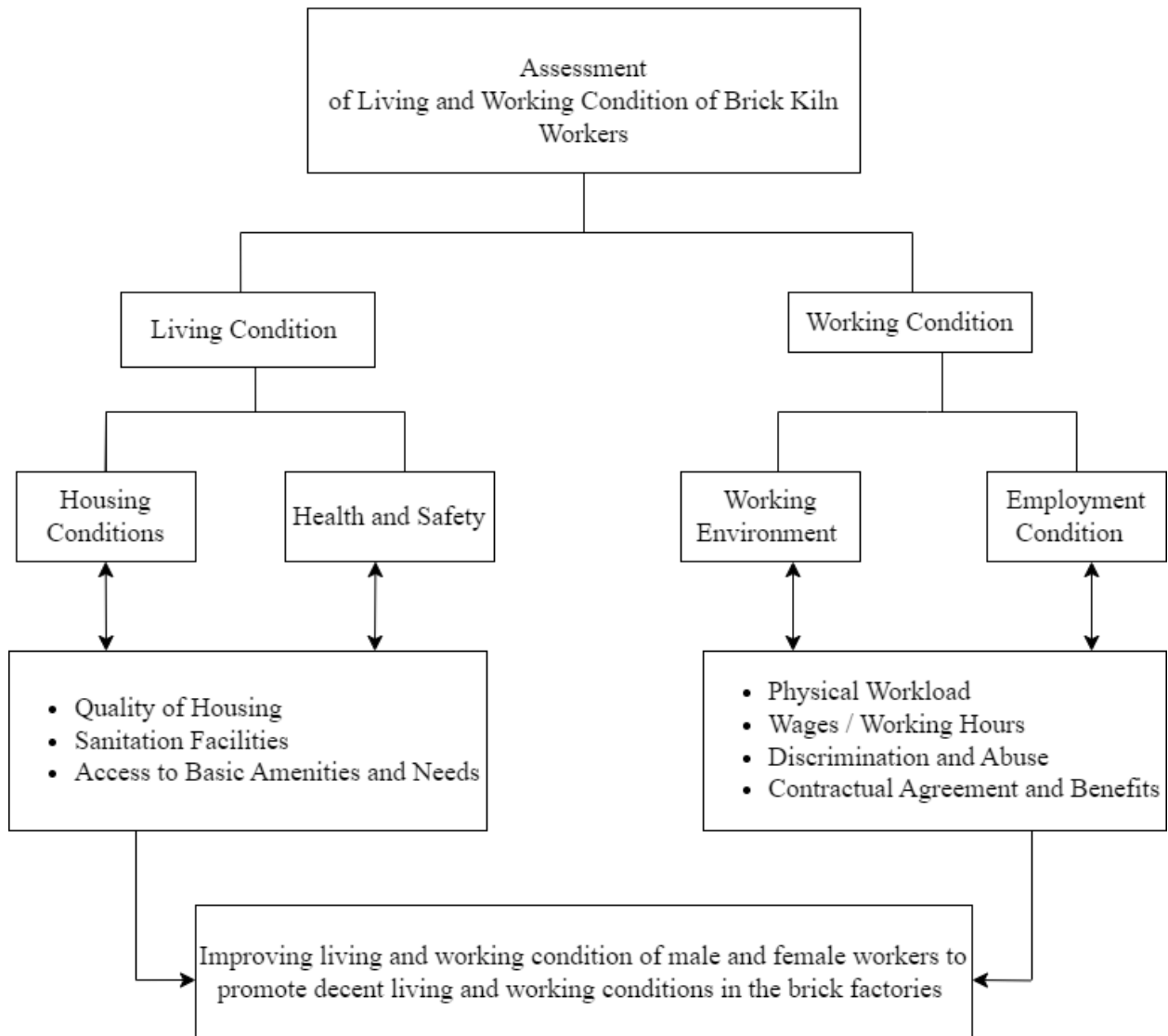


Source: ILO, (2009)

Figure 1: 8-8-8 Balance Model

2.2 Conceptual Framework

The conceptual framework of this study summarizes the possible factors that assess the various aspects of living and working conditions of brick kiln workers. The conceptual framework for this study can be shown and explained as follows:



Source: Author (2021)

Figure 2: Schematic diagram of conceptual framework

CHAPTER III

Research Methodology

Research methodology refers to the overall action plan for research which consists of a systematic procedure that describes the method and process adopted in the research. This chapter focuses on the research process and methodology applied to meet the stated objective of the study. Both primary as well as secondary data were used in this study. Information was obtained through structured questionnaires from various laborers working in brick kilns of Bhaktapur.

Surveys and observation were the primary data collection techniques. The secondary data was articles, books, and published and unpublicized online journals and reports. In order to delineate the living and working conditions of brick kiln workers in Bhaktapur, the descriptive and explorative form was preferred. The research was descriptive in the sense that it described the socio-economic aspect of laborers and explorative in a sense as it also explored the LWCs of laborers in brick kilns of Bhaktapur.

3.1 Research Design

The research is quantitative in nature. A cross- sectional survey was adopted to gather data from the brick kiln workers. Descriptive-explorative design is adopted in the procedure. It refers to research methodology where descriptive and explorative research techniques are combined together to achieve a greater understanding of a particular subject of interest. It thoroughly describes a phenomenon while also exploring and uncovering potential factors, trends, or relationships associated with that phenomenon. By combining descriptive and exploratory design it explores brick kiln workers' living and working conditions and reveals the root causes behind these conditions. Adopting a descriptive- explorative research design is appropriate for this study as it provides a description regarding LWCs of BK workers and it also seeks to uncover why these conditions exist and the factors influencing them.

3.2 Study Area

For the study, the Swet Bhairab Fixed Itta Udyog, Saraswati Fixed Itta Udyog and Shree Saraswati Fixed Chimney Brick Factory, located in the Changunarayan ward no. 9, Tathali municipality were chosen as the study area.

3.2.1 Background of the selected areas

There are 64 brick kilns established and functioning in Bhaktapur district. Among them “Swet Bhairab Fixed Itta Udyog” is one of the largest brick factory located in Tahathali, Bhaktapur. The ownership of the kiln is divided among five individuals. These individuals own and manage the kiln. The kiln covers 24.42-25.44 hectare (480-500 ropani) of land. During off season, 5.09- 10.17- hectare (100 – 200 ropani) land is utilized for agriculture purposes. It is also very common for brick kiln workers to engage in agricultural activities during the off-season, as it provides them additional earnings when the brick production process is not active. This practice benefits both the owner and the worker as the owner can productively utilize the land during off seasons whereas workers also earn extra income by engaging in agricultural work. One individual worker is responsible for producing 100,000 bricks in season for which they are given an advance payment of Rs. 30,000. Bricks are baked at high temperature of 650 degree, from which two qualities of bricks are produced “hard bricks” and “soft bricks”. The firing of bricks starts during Magh 1 and gets shut by Jestha 10 as of rules set by the Bhaktapur Brick Industry Association that need to be followed by every registered brick kiln.



Source: Google Earth

Figure 3: Geographical area of Swet Bhairab Fixed Itta Udyog

“Shree Saraswati Fixed Chimney Brick Factory” located in Tahathali, Bhaktapur covers an area of 0.67 hectares (13 ropani) (figure 3). Owned by a single individual, this kiln is solely dedicated to manufacturing bricks. The manufacturing process includes firing of “green” bricks which are brought from another factory. Throughout the brick making season, the factory hires workforce of 500 to 600 workers. Similarly, “Saraswati Fixed Itta Udyog” also located in Tahathali, Bhaktapur covers an area of 0.58 hectares (11.4 ropani) (figure 4). Similar to “Shree Saraswati Fixed Chimney

Brick Factory” it is a designated space for producing bricks accommodating 500-600 workers per season. The distance between these two brick kilns is 0.13 kilometers.

Additionally, the distance between these three brick kilns is 0.5 kilometer. The recruitment and work season pattern is almost the same in these kilns. The operational period starts in November following the conclusion of the major festivals of Dashain and Tihar, and it ends in May. Nevertheless, if work is available laborers often remain at the kilns alongside their families throughout the year. During on-season, these brick kilns accommodate workers from all over Nepal and from some parts of India. Maximum number of workers seasonally migrate to the kilns to work and reside there temporarily.



Source: Google Earth

Figure 4: Geographical area of Saraswati Fixed Itta Udyog, and Shree Saraswati Fixed Chimney Brick Factory

3.3 Population and sample of the study

The study aims to evaluate the LWCs of brick kiln workers, with a primary focus on laborers. The study population for this research includes both workers who temporarily and permanently reside within the kiln premises of Bhaktapur. It includes individuals who are actively engaged in labor-intensive task in the brick kilns such as brick molders, stackers, loaders, transporter, machine operator and other manual laborers involved in various stages of brick production. This sample was chosen with the understanding that LWCs greatly influence their well-being and work performance.

3.3.1 Sample Size

The sample design consists of two category of respondents, male and female. This study focuses on 47 respondents who work at brick kilns. These workers are from three different brick kiln places in Bhaktapur district.

3.3.2 Sampling technique

Purposive sampling was applied to select brick kiln industries and workers. Three brick kiln industries were selected from Bhaktapur. From each industry workers (both permanent and seasonal) were selected purposively.

Brick Kilns in Bhaktapur District	No of Respondents
Swet Bhairab Fixed Itta Udyog	30
Saraswati Fixed Itta Udyog	6
Shree Saraswati Fixed Chimney Brick Factory	11

Research participant eligibility

The eligibility criteria for both male and female participants include:

Age	:	Adults of working age who are legally permitted to enter the labor force.
Gender	:	Both male and female workers, ensuring representation from both genders.
Occupation	:	Individuals actively engaged in labor-intensive task in various stages of brick production
Residency	:	The brick kiln premises have both temporary and permanent residents, representing diverse range of living situations.
Diversity	:	Involvement of participants from diverse backgrounds and roles with the brick kiln

Purposive sampling was considered the most appropriate sampling technique for this study due to the following considerations:

Targeted section	:	The study focused on specific group of workers and their families in the brick kiln (Male and female laborers).
Seasonal Variations	:	Data was collected during off- season, which further complicated the process of identifying potential respondents. Total 47 respondents were selected during the off-season.
Resource Constraints	:	Due to limited time resources, purposive sampling techniques was opted as it maximizes the available resources by intentionally selecting individuals who were accessible, readily available and willing to participate, and likely to provide relevant insights.

3.4 Data Collection Procedure

3.4.1 Data collection tools

The quantitative data collection designed to assess the living and working conditions of brick kiln workers consists of tools including Kobo Toolbox, a survey structured questionnaire, and an observation checklist. Data collection tools were formulated after reviewing existing information. Prior to conducting the survey, informed consent was developed and presented to the brick kiln workers.

Tools to collect primary data are as follows:

-
1. Survey : Kobo toolbox, a data collection and management software, which serves as the digital platform through which data is gathered, enabling efficient and real-time information collection. The survey structured questionnaires were designed to collect various aspects of the brick kiln workers' lives, encompassing their living conditions, work environment, health access, and socio- economic status.
 2. Observation : Observation checklist was developed to record on-site condition, such as housing facilities, safety and privacy, workspace safety measures and amenities and basic necessities
-

Incorporating both survey and observation as a research tool was essential for this study. As survey offers a structured approach for gathering measurable data as it may overlook important details about workers' everyday life, how they feel, how they work and the difficulties they face. So, observation is also an essential tool as it can perceive everyday realities, interaction and relationship dynamics which cannot be presented through survey alone. Furthermore, observation serves to validate the findings obtained from surveys.

3.4.2 Site visit and pre-test

Before gathering the data, initial visit was made to the brick kilns, which was then followed by a pre-test phase to understand the living and working conditions of the workers. During the visit the site was explored to gain a deeper insight into the workers' daily lives, including their homes, work environment, and challenges. The visit also provided vital information for data collection, such as, estimated number of families at the kiln. The visit was significant for connecting with potential

study participants and becoming familiar with the kiln community. The structured questionnaire and observation checklists were pre-tested on a small scale aiming to identify and address any tool-related issues (see Appendix C and D).

3.4.3 Data collection

This study is focused on evaluating the living and working conditions of brick kiln workers. The primary source of information was directly collected from the field, which took place from June 6 to June 13, 2023. The survey consisted of three sections: demographic data, living conditions, and working conditions. Additionally, an observation checklist was used to explore deeper insights

Before going to the brick kiln for data collection, permission was obtained from the owners of Swet Bhairab Fixed Itta Udyog, Saraswati Fixed Itta Udyog, and Shree Saraswati Fixed Chimney Brick Factory to ensure the data collection process without any obstacles.

Purposive sampling was used to select participants who were potential respondents actively working in the kiln. They were selected based on their availability during the survey period. Availability was determined by whether they were engaged in work at the kiln or not. The survey was conducted during break hours between 11 a.m. and 2 p.m., taking into consideration the workers schedules. Once available, they were introduced to the study's purpose. The survey only proceeded with those who willingly agreed and provided their consent (see Appendix A, C and D). The survey was designed to be brief, lasting no more than 10 minutes. This ensured that the valuable time of the participants was respected.

3.5 Data Analysis Procedure

The collected quantitative data was processed through specialized software such as SPSS and Microsoft Excel. This software package was used for crucial task such as data entry, verification, editing, and tabulation of the research findings which was conducted manually. The analyzed quantitative data has been effectively presented using appropriate frequency tables and bar graphs. Throughout the analysis process, statistical measures like percentages, ratios, and averages were utilized to derive meaningful insights from the data.

3.6 Ethical Consideration

Accountability, trust, mutual respect and fairness always results in precise research (Žukauskas,, Vveinhardt, & Andriukaitienė, 2017). There was proper consideration of all ethical aspects. Consent and permission were taken from the Brick Kiln owners and workers who participated. The participants were given clear guidelines and enough time to answer the research questions since their input was crucial. Privacy was a top priority: the information collected was kept safe and private. The data were not manipulated. Permission was given by the respondents to determine if they wanted to disclose their identity or not. Lastly, secondary sources have been acknowledged with proper references.

CHAPTER IV

RESULTS

4.1 Introduction

The chapter deals with analysis and interpretation of the data obtained from the structured questionnaire. The data was collected from three brick kilns: - Swet Bhairab Fixed Itta Udyog, Saraswati Fixed Itta Udyog, and Shree Saraswati Fixed Chimney Brick Factory of Bhaktapur District.

Collected data was compiled and reassessed for completeness. The data was coded as preliminary work and then entered into SPSS program version 20. The necessary statistical measurements were applied as percentage, frequency and bar graph to present the data.

4.1.1 Demographics

In this section, the demographic characteristics represent the gender and age of the respondents. The demographic characteristics were analyzed using descriptive statistics, computing the number of respondents and percentage of each group.

Table 1:

Demographic Characteristics

		<i>n=47</i>	
		Frequency	Percent
Gender	Male	34	70.8
	Female	13	27.1
Age	Below 15	0	0
	18-24	6	12.5
	25-35	27	56.3
	36 above	14	29.2

Source: Field Survey, 2023

Table 1 shows the percentage and frequency of demographic characteristics of the respondents. Among 47 respondents 70.8% respondents were male and 27.1% were female. In other words, more than half of the workers were male. In the age group section, workers from 18-40 years of

age are engaged in brick kiln labor. Out of 47 workers, 12.5% are from 18-24 age group, 56.3% are from the 25-35 age group, and 29.2% are from 36 above age groups.

Workers in the 25-35 age group are more common in this industry because this age group is more fit for hard work as workers from this age group have the ability to learn new task are flexible and adaptive to new work and technologies. Ability to do hard work is influenced by an individual's physical health, mental resilience, skills and motivation (Carlsson & Eriksson, 2017) . Also, men and women from rural areas are engaged in chopping and carrying heavy woods, in agricultural activities which are all done manually and considered to be everyday chores. Brick kiln industries prefer hard working workers who can work for long hours and workers who have the capacity to do difficult work. This study also reveals that child labor was not permitted in surveyed brick kilns.

Table 2:

Age – Gender Crosstabulation

n=47			
Age	Gender		Total
	Male	Female	
18-25	5	1	6
25-35	19	8	27
36 above	10	4	14
Total	34	13	47

Source: Field Survey, 2023

The above data distinctly shows that the highest number of workers in the industry comes from the age group of 25-35, in which the highest number of workers were male.

Religious Composition of Workers

In Nepalese social system, religion is associated with the job type. Traditionally, in Nepal religion restricts their followers to enter into some kind of jobs but now in present different religious people work together in brick kilns with mutual understanding of respect and acceptance of diverse religious beliefs, practices, and perspectives among individuals from different religious backgrounds.

Table 3:

*Religious Composition of Workers**n=47*

Religious group	No. of respondents	Percent
Hindu	32	67
Buddhist	14	30
Christian	1	3
Total	47	100

Source: Field Survey, 2023

The above data shows that 32 respondents i.e., 67 % of the total practice Hinduism, 14 respondents i.e., 30 % respondents practice Buddhism, 1 respondent i.e., 3 % practice Christianity.

Nepal is a country with a diverse religious population and religion plays a significant role in laborers' lives. The data from the field showed that no problems arose from brick kiln laborers' diverse religious backgrounds. Any individual from any religion could work in brick kilns.

Table 4:

*Caste Composition of Workers**n=47*

Caste group	No. of respondents	Percent
Magar	19	39.6
Brahmin/Chettri	12	25
Newar	3	6.3
Dalit	8	16.7
Rai	2	4.2
Tamang	3	6.3
Total	47	100

Source: Field Survey, 2023

The above table shows that the highest number of workers are of Magar ethnic group, which consists of 39.6 % of the total laborers. There were 25 % Brahmin/Chettri, 6.3 % Newar and Tamang, 16.7 % of respondents are (Others) Dalits and the lowest were Rai only 4.2 %. The sample

of the study shows that the majority of the workers were from these ethnic groups of Nepalese society.

In addition, it indicates that workers of various castes and ethnic groups work in the brick kiln sector of Nepal. Even though Nepal is a caste-based society, a special kind of togetherness was observed at the kilns. These workers act, behave and think in similar ways in the sense where they get along and work together, help each other and work in a team. Working in a team creates a friendly work environment which helps them understand each other in a better way despite of having different diets, ways of earning money, and backgrounds.

Table 5:

Education Status of the Workers

n=47

Educational status	No. of respondents	Percent
Literate	31	65
Illiterate	16	35
Total	47	100

Source: Field Survey, 2023

Table 6:

Gender and Educational Status Crosstabulation

n=47

Gender	Education Status		Total
	Literate	Illiterate	
Male	13	21	34
Female	3	10	13

Source: Field Survey, 2023

The table shows that 65 % of the workers are literate while the remaining 35 % are illiterate. Among the literate workers it can be concluded that the majority of the males are literate and only a small number of females are literate.

65 % of the workers are literate, but due to poor economic conditions they are unable to study further, thus impacting their ability to get a job in any other field and leaving the brick industry as their primary remaining option.

Table 7:

Education Qualification of the Workers

n=47

Educational Qualification	No. of respondents	Percent
Primary level (1-8)	14	29.2
Secondary Level (9-12)	2	4.2

Source: Field Survey, 2023

From the above table, out of 100 % labors 65 % were literate, out of this 29.2% completed primary education whereas only 4.2 % of the labors completed secondary level education. Through observation it was clear that workers possessed reading and writing abilities as they were seen reading newspapers and calculating their wages with the owner and “naike”. This scenario highlighted that workers with lower educational backgrounds were engaged in the brick kilns. They were involved because the work at the kiln matched their skills and did not require any education qualifications.

Table 8:

Gender and Marital Status of Workers Crosstabulation

Marital status of the workers reflects their social role in society. In this regard an attempt has been made to delineate their marital status. The following table provides the marital status of the respondents.

n=47

Marital Status	Gender		No. of Respondents	Percent
	Male	Female		
Married	20	13	33	69
Unmarried	9	1	10	20
Divorced	3	1	4	11
Total	32	15	47	100

Source: Field Study, 2023

The above table shows that 69 % of the workers are married whereas 20 % of the workers are unmarried, and 11 % are divorced. The ratio of married workers to unmarried workers was very high. There were significant numbers of divorced workers too.

The majority of the women were married, the presence of a married woman working alongside her husband becomes clear through various observations. Firstly, they lived in the same huts and had a pattern of arriving and leaving together and assisting each other during works. They were also taking breaks together to have meals which further emphasizes on their shared life. This identifies them as a married couple involved in both work and personal sphere. Another reason is linked with safety and privacy, work environment and living condition lacks safety measures and private space which can be risky. Women who live in the industry quarters feels safer with their partner as the chances of being abused and harassed are very thin, as observed the quarters were closely built without protective locks. Not only married, but also unmarried and divorced men and women were also contributing to run their families.

Table 9:

Family Size

The family's size affects the laborers' work and earnings to expenditures ratios. It directly affects the economic condition of the family as well as individuals. According to the 2011 Census, the average family size in Nepal is 4.9. The family size of workers in brick kilns of Bhaktapur varies from 2-7 with an average 2.35, Compared to the national census figure (4.9 family size), the average family size (2.35) is lower among brick workers.

n=47

Family Size	Number	Percent
Less than 4	34	70.8
4-5	13	27.1
6 or more	0	0
Total	47	100
Average family size	(2.35)	

Source: Field Study, 2023

The average family size of the workers in the brick kilns of Bhaktapur was 2.35. Similarly, around 70.8 % of the respondent's family size was less than 4 and it followed by family size 4-5 with 27.1 % and family size 6 or more with 0 % respectively. This shows that the workers were well aware of the disadvantage of having a larger family size.

Table 10:

*Work Status and Place of Origin**n=47*

Work Status	No of respondents	Percent
Permanent	10	20.8
Seasonal	37	77.1
Total	47	100

Source: Field Study, 2023

From the above table, it can be proved that more than a quarter of the workers employed in brick kilns of Bhaktapur are migrants. It is further important to note that the ratio of seasonal migrants in the brick kiln is far greater than that of permanent migrants, which is a trend that has remained

constant overtime. This proportion is not surprising at all as brick kilns are regarded as a labor-intensive industry, like construction which requires a large workforce to function. Several of these migrants especially women are incorporated into the labor market after their marriage because of their spouses' employment.

Table 11:

Composition of Workers by the Place of Origin

n=47

Place of Origin	No. of Respondents	Percent
Rolpa	20	43
Dang	13	28
Sindhupalchowk	4	8.3
Salyan	4	8.3
Bhaktapur	2	4
Sindhuli	1	2.1
Solukhumbu	1	2.1
Rameychap	1	2.1
Kavre	1	2.1

Source: Field Study, 2023

During the study, a majority of the workers were found to be from Mid- Western Development Region – Rapti Zone (Rolpa, Dang and Salyan), followed by the Central Development Region – Bagmati Zone (Sindhupalchowk, Bhaktapur, Sindhuli, Rameychap and Kavre). A small percentage of workers (less than 3 %) also migrated from Eastern Development Region – Koshi Province (Solukhumbu). Overall, the place of origin trends towards people travelling long distance for work for survival or shifting into more urbanized area of seek facilities. Through observation it was proven that “naikey” who is a recruitment agent in brick kilns, recruited workers from Mid- Western Development Region – Rapti Zone presenting the major caste group – Tamang and Rai.

4.1.2 Living and Working Condition

Household-head

The head of the household determines the decision-making power of men and women in Nepal. (K.C , 2073). In Nepal the majority of families are mostly male dominated. This could be attributed to traditional patriarchal society or systems. In recent years the trend has gradually changed, with many households having mixed proportions of male and female household heads. This pattern is increasing over the years because of both male and female labor migration.

Table 12:

Distribution of Brick Kiln Workers by Gender of the Household Head

n=47

Gender of the household head	Brick Kiln Workers	
	No. of Respondents	Percent
Male	42	89
Female	5	11
Total	47	100

Source: Field Study, 2023

The table shows that most of the household heads are male. It was found that 89 % of households have male heads and only 11 % of households have female heads. Females were the heads of the families primarily in cases of unmarried or divorced women. The data reveals that, in households containing at least one brick worker, the person who is engaged in work is the head of the household, or in other words the breadwinner.

Number of children

The number of children born in each household is determined by the composition of different socioeconomic and cultural practices present in Nepalese society. Out of total married respondents, all 33 married respondents had children. Likewise, around 56.3 %of the respondents had two children whereas 12.5 % of respondents had one child. The average of children was 1.7. It was lower than the national figure of 4.3 children per woman. In terms of education, 50 % of the children, i.e., 24 children go to school whereas 18.8 % i.e., 9 children do not attend any kind of schooling.

Table 13:

*Distribution of Workers According to their Marital Status and No. of Children**n=47*

Marital Status	No. of Children	Percent
Married	33	68.8
Unmarried	0	0
Divorced	1	31.2

Source: Field Study, 2023

4.1.3 Facilities Provided by the Factory

Distribution of Workers on the basis of their Residence

The following residences were collected from the survey to find out the living condition of the respondents. The findings are shown in the table below. Due to low salaries the workers are unable to stay in rented houses and are thus obliged to stay inside the industry quarters.

Table 14:

*Residential status of Workers**n=47*

Residential Status	No. of Respondents	Percent
Rental house	10	21
Own house	2	5
Industry Quarter	35	74
Total	47	100

Source: Field study, 2023

The table showed that the majority of the respondents 74 % lived in the industry quarter where as 21 % of the respondents lived in the rental house and 5 % of the respondents lived in their own house.

An industry quarter in context to this study refers to housing accommodation provided by the kiln for the workers. They are situated inside or close to the industry location and are offered to the workers free of cost if they want to stay in there. It is a very common practice where the workers use damaged and unbaked green bricks supplied by the owner to construct their living space within

the given area. The term "jhyuali" is used by the workers to describe these living arrangements, which may also be referred to as huts, but they also have the option to live outside the industry quarter if they prefer. The main objective of this practice is to provide accessible housing to the workers near their workplace, although the provided accommodations and amenities could be unsatisfactory.

The respondents who lived in a rented house or owned their own house were involved in positions that earned more such as manager and supervisors. The workers who migrated alone preferred the factory quarter to stay. 90% of the industry quarter- including the flooring and walls were made up of brick, tin and bamboo without proper ventilation. In harsh weather conditions 64% of the respondents suffered from extreme heat and heavy rainfall as well. Those workers who chose to stay inside the industry quarter had no separate room for kitchen and dining (80%). For cooking purposes 100% of the respondents used Liquefied petroleum gas (LPG) as their primary energy source for cooking which was provided by the industry at a reasonable cost. Observation also revealed that significant portion of workers commonly prepared meals in their huts comprising rice, lentils and green vegetables. However, for the midday meal the workers preferred to eat at local cafes around the kiln areas. The majority of the workers were satisfied with the living conditions as they were provided with electricity and cooking sources which were not available back home.

Years lived in the Residence

Most of the workers in Brick Kilns are seasonal migrants. The years lived in the brick kiln usually differs based on individual circumstances, location and work arrangements. The industry is seasonal and usually operates mostly for about six months from December to June (Brick Kilns in Nepal – A Situation Report, 2016). Some brick kiln workers may choose to live on-site or nearby during the entire brick-making season, which typically lasts 6-7 months, while others may have more permanent arrangements and reside there for several years. The reasons why some workers choose to live on-site or nearby for an extended period may include economic factors, lack of alternative housing options, and the need to be close to the workplace to maintain their employment.

Table 15:

Distribution of Workers on the Basis of Years Lived in the Residence

n=47

Years	No. of respondents	Percent
Less than a year	21	47
1- 5 years	20	43
More than 5 years	4	10

Source: Field study, 2023

The table above shows that the majority of respondents (seasonal migrants) have lived in the industry quarter for less than a year (47%) followed by 1- 5 years (43%) and more than 5 years (10%) respectively.

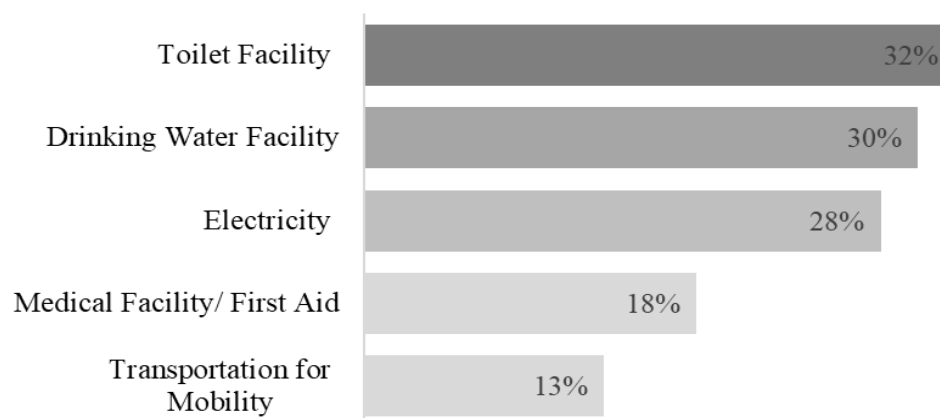
Basic Amenities provided by the Kiln

Basic amenities in brick kilns are essential to ensure the well-being and safety of the workers. The employers are responsible for providing basic amenities and facilities for migrant workers. The specific amenities may vary depending on the location and regulations.

Figure 5:

Access to Basic Amenities and Facilities

Brick Kilns in Bhaktapur provides basic amenities facilities to the workers which is hardly sustainable for them.



Basic Amenities at Workplace

Out of the total respondents 32% reported that they have access to a toilet facility which is located inside the yard of the kilns. 79% of the respondents shared a common toilet facility with no proper handwashing and water facility. Through observation, especially the women workers were the most vulnerable because the toilets did not have necessary WASH facilities such as clean and accessible toilets, safe and private washing area, proper disposal system for their menstrual waste products and facilities for maintaining hygiene. Majority of the female respondents (28%) disposed their menstrual hygiene products in community rubbish and others (10%) preferred burning them.

66% of the respondents had access to drinking water from public taps and standpipe which was located in their own company/site whereas a significant number of workers dependent upon various sources like Bottle/ Jar Water (56%), Protected wells (27%) and water tankers (15%). The majority of the workers (58%) were aware of the health hazard of unpurified water, so they preferred filtration and boiling of water before consumption. Even though the industry stated that they provide filtered water for the workers the results showed that majority of the workers were unable to access it.

28% of the respondents had access to electricity, where they had had to join the electricity lines manually by themselves. 80% of the respondents had cellphones whereas only 70% had access to the internet. Through observation it was found that most of the cellphone's owner were males, and it was mostly used for entertainment purposes. Electricity was provided free of cost for the workers.

Medical Facilities at Workplace

The results revealed that the medical facilities at the workplace were lacking and were not properly equipped. Regular checkups of the workers were barely encouraged. Medical insurance of the workers was done by the industry only during the season for 6 months (October – May). Majority of the workers (40%) were unaware of this information, which proves that the facilitation of key information is lacking in the workplace. The industry provides basic compensation in case of workplace accidents and injuries.

The firepersons, stackers, and transporters tend to bear a higher risk during their work (Bajracharya, Gurung, Mathema, Sharma, & Mishra, 2021). The fireperson has to work in extreme

heat and dust on a daily basis, which be physically straining. The stackers also are at risk of injury as they are required to climb while carrying brick piles, and they are constantly exposed to dust. The transporters are also at increased risk of physical ache while transporting heavy loads of bricks. Similarly, the molders are responsible for monotonous and rigorous work which is a physically demanding task such as squatting which requires lots of neck and shoulder bending, while being in a set position for long hours this often leads to physical pain and bodily discomfort reflecting the challenging nature of their work. (Joshi , Dahal , Poudel , & Sherpa , 2013)

Observation showed that occupational health and safety precautions and measures was very low among the workers in the kiln. Many workers did not wear any gloves, mask or closed shoes. Further 78% of respondents reported that there was no provision of personal protective equipment's was made. The owners only provided the safety equipment once so, it was also found that if the workers wanted any protective equipment, they are required to manage it themselves at their own expense. The masks were seen extremely uncomfortable while working in the heat, the gloves were torn very easily which delayed the working capacity of the worker, and the closed shoes were considered uncomfortable during hot weathers, so the workers preferred sandals or slippers. Women usually wrapped shawls around to cover their head and face to protect themselves from heat and dust. (Bajracharya, Gurung, Mathema, Sharma, & Mishra, 2021)

Welfare Facilities

The respondents (13%) stated that the brick kilns did not provide transportation facilities to the workers, they had to manage their way back home by themselves. 90% of the respondents were not provided with a written contract which could provide them with several potential welfare - related benefits. Through observation it was proved that “*naike*” recruiting agent who recruits labor force at the kilns from various districts of Nepal and India. They have the most power, invariably male and play a dominant role in the kilns. Most of the respondents were also least bothered by having a written agreement as they were fully dependent upon the “*naike*” for their welfare.

4.1.4 Physical Environment of Brick Kilns in Bhaktapur

Through field survey and observation, it was found that the physical environment of Brick Kilns in Bhaktapur was not satisfactory. The brick work season ends before the arrival of monsoon (June – July). Working condition becomes more challenging to the workers at the end of February due to scorching heat. As the production of brick must be strictly done in dry conditions, workers are exposed to wet clay, dust and smoke during molding of clay and transportation of baked bricks. (Joshi , Dahal , Poudel , & Sherpa , 2013). Brick kilns operate at very high temperatures, 70% of the respondents reported that the work environment was very uncomfortable due to dust and extreme heat especially during the stacking and the firing process. The workers are also involved in physically demanding work 30% of the respondents were engaged in hard physical labor with exposure to extreme heat and dry dust. They were working in an open area with no shades and covers exposing workers to heat and dust. In the kilns there were no child centers and the environment inside the kiln was not safe for the children. The quarters were small and dark with no proper ventilation to get natural air. The industry did not manage any household waste disposal area for the workers. 90% of the workers had to manage and dispose of their own waste as there was no provision for timely collection of waste by industry. From the study area it was clear that the physical condition regarding health was found very poor and unsuitable.

Income of the Worker

The economic status of a person or a family is defined according to his or her income generation ability. If the income of a worker is stable, then the status of the worker becomes sustainable. The salary of the workers in Brick Kilns of Bhaktapur without overtime ranges from Rs.500 to Rs. 1000 per day depending on the type of work they do.

Table 16:

Distribution of Brick Kiln Workers by Monthly Income.

<i>n=47</i>		
Monthly Income	No. of respondents	Percent
Less than 10,000	4	13
10,000 - 12,000	37	78
More than 12,000	6	9

Source: Field Study, 2023

The majority of the workers had monthly income between Rs. 10,000 - 12,000 (78%) which was followed by less than 10,000 (13%) and more than 12,000 (9%) respectively.

Household Expenditure

The household expenditure pattern depends upon different factors such as family size, needs, gender etc. The level of expenditure varies between different people and their households. Household expenditures also directly aligns with the level of earnings of the workers. Comparing the salary and the expenditure level it shows that most of the families cannot sustain themselves with the salary they are earning. As 70% of the workers receive untimely remuneration. Very few have high expenditure levels, which may be due to larger family size and also could be their ability to sustain themselves in the existing economic situations.

Table 17:

Distribution of Brick Kiln Workers Household by Family Monthly Income

n=47

Family Monthly Expenditure	No. of respondents	Percent
Less than 10,000	12	26
10,000 - 12,000	31	66
12,000 – 15,000	4	8

Source: Field Study, 2023

It was found that majority of the respondents (31%) reported that their monthly family expenditure was 10,000 - 12,000 which was followed by Less than 10,000 (26%) and 12,000 – 15,000 (4%) respectively.

Categories of Worker According to their Working hours and Earnings

Through field study and observation, it showed that the working hour and earnings of the workers vary according to the nature of the tasks that the male and female workers are involved in.

Table 18:

Categories of Worker According to their Working hours and Earnings

n=47

Brick Workers	Time	Description
Stackers and Loaders	7AM – 11AM	During off season stackers and loaders worked during early morning hours when the demand of bricks is high. In the afternoon they take a break. They were also considered as “skilled labor” as they were responsible to stack and load brick in a correct manner before and after firing of the brick and were separated the cracked and damaged bricks. They work inside the kiln where the working environment contains high temperature and dust. The earning of the male and female varies the male workers earns Rs.800- Rs.1000 per day whereas the females earn from Rs.500 – Rs.800 per day and their wage was provided according
	(11AM - 2PM) <i>Break from stacking and loading – women usually utilized this time to finish their household chores and in preparing lunch for themselves and their family</i>	
	2PM – 5PM	

		to the number of brick they make, stack or load per day.
Transporters	9AM - 5PM (<i>lunch breaks in between, rate depends upon the number of trips and shifts, it was also found that the transporters are needed to move and deliver the bricks to the destination.</i>)	The transporters worked throughout the day in season. Donkeys were used as a main source of transportation to transport molded bricks into the fireplace. Trucks (Eicher) were preferred to deliver the brick to those who demands it. The transporters earn per trips 100 bricks that they transport. The industry is solely responsible for accidents of the drivers during duty.
Manager – Supervisors	9AM – 5PM (<i>Breaks in between</i>)	Managers and Supervisors in Brick Kilns of Bhaktapur have a significant roles in creating a safe working environment while ensuring the production of quality of bricks according to set standards. They are responsible for managing and supervising the overall operation at the kiln, also to ensure that the kiln in a operates in a manner that is productive and efficient.

They earn salaries in the range of Rs.25,000 to Rs.30,000 per month

Source: Field Study, 2023

Level of Job Satisfaction

Table 19: Level of Job Satisfaction

n=47

Level of Job Satisfaction	No. of Respondents	Percent
Satisfied	27	58
Unsatisfied	20	42
Total	47	100

Source: Field Study, 2023

The above table showed that 42 % of the workers were unsatisfied with their job. They were trying to quickly finish their work and shift back home with no intention of returning back. 58 % were satisfied because they were able to earn and access facilities. The main reason for the workers' dissatisfaction were untimely remuneration (34%) and lack of workplace facilities (11%). The unsatisfied workers are among those who have children and who work for more than 8 hours but they still earn below Rs.10,000. Their maximum time is spent at work but still the wage that they are being offered cannot fulfil their basic needs due to which they are less motivated to work. Some unsatisfied workers were obliged to work because they did not have any other skills that is required for high salary job.

Job Security

Job security can be a complex issues when it comes to brick kiln workers. As there could be various complications such as location, labor laws, industry rules regulation and practices, and economic condition of the industry. Brick kiln workers often face various challenges that may include nature of work, informal unemployment, lack of social security, unsafe working conditions and wage issues.

Table 20 :

*Job Security**n=47*

Job Security	No. of Respondents	Percent
Yes	15	32
No	32	69
Total	47	100

Source: Field Study, 2023

Out of all the respondents 69 % of the respondents did not had job security and only 32 % of the workers had job security. The main reason behind lack of job security was due to brick production being a seasonal activity as workers may witness periods of unemployment or reduced working hours during off-seasons. Another main reason is many brick kiln workers are employed in the informal sector with no employment contracts, benefit and legal protection which makes them more vulnerable to exploitation. Wage issues also lead to economic insecurity and make it tough for the workers to meet their basic needs.

Discrimination and Abuse

Table 21:

*Distribution of Brick Kiln Workers by Discrimination and Abuse**n=47*

Any Type of Discrimination Faced	Number	Percent
Yes	5	11
No	42	89

Source: Field Study, 2023

Out of all the respondents, 89 % reported that they have not suffered any form of discrimination. However, 11 % of the total reported that they suffered from discrimination and abuse. The major types of discrimination and abuse the workers faced were verbal abuse and different salaries for the same work.

Saving organizations

Saving money is an essential financial practice for everyone, including brick kiln workers. These workers often face challenging working conditions and may have limited income, so it's crucial for them to manage their finances wisely and save for their future.

Table 22:

Distribution of Brick Kiln Workers by Savings they make in any financial organizations

n=47

Financial Organizations	No. of Respondents	Percent
No Savings	29	62
Bank	17	36
Micro Finance	1	2
Total	47	100

Source: Field Study, 2023

Majority of the respondents, 62 %, did not have savings in any financial organizations whereas, 36 % of the workers have savings in banks and only 2% of the workers had savings in Micro finances. This result shows that workers have very little financial literacy and also due to their low untimely wages they were unable to manage their basic necessities and were demotivated to make any savings for their future.

CHAPTER V

FINDING DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter elaborates on the findings of the research. In this chapter summary, discussion and conclusion of the result obtained from data analysis is presented. The first section is summary of the findings obtained from the interpretation of the result. The second section consists of discussion and the third section consists of conclusion.

5.2 Summary

This chapter summarizes results generated from the previous chapter. The study of “Assessing the Living and Working Conditions of Brick Kiln Workers in Bhaktapur District” was taken to evaluate the living and working conditions of brick kiln workers focusing on facilities provided by the industry, their built environment and difficulties they face in their work environment. Based on the literature review and the purpose of the study structured questionnaires were prepared where questions relating demographics LWCS were included. The questionnaires were presented to 47 labors working in three BKs of Bhaktapur.

The major findings which were reported in chapter four are summarized below:

The demographic analysis revealed that out of 47 respondents, the majority were male (70.8%), female (27.1%). The largest age group was 25-35 years old (56.3%), followed by those above 36 (29.2%), and 18-24 years old (12.5%) this suggests that child labor is not permitted in the surveyed brick kilns. The religious composition of the workers reflects a diversity of Hindus (67%), Buddhists (30%), and Christians (3%). Among the ethnic group Magar ethnic group is the most represented (39.6%) among the laborers. About 65% of the labors were literate of which notably more men were literate than women. Most literate workers had educational qualification of primary level education (29.2%). Most workers travelled from Mid-Western Development Region, specifically Rapti Zone (which includes places like Rolpa, Dang, and Salyan) followed by Central Development Region, the Bagmati Zone (which include places like Sindhupalchowk, Bhaktapur, Sindhuli, Ramechhap, and Kavre) they were willing to travel long distance for better work opportunities and urban facilities. These findings portray that industry employes labors from diverse backgrounds, genders, age groups, place of origin, religions, and ethnicities. The industry

demanding for low skill labor having physical strength which was most suitable for individuals with lower educational backgrounds. A significant portion of workers were married (69%), and on average, the size of their family were relatively small consisting 2.35 members each per household. This indicates that economic limitations might influence family planning decisions, as number of children in Nepalese households are influenced by socio-economic and cultural factors. Among the married respondents (33 in total) all had children where 56.3% of respondents had two children, while 12.5% had one child. The average number of children per household was 1.7, considerably lower than the national average of 4.3 children per woman. In terms of education, 50% of the children (24 children) were attending school, whereas 18.8% (9 children) were not enrolled in any kind of schooling due to financial constraints. Majority of workers (77.1%) were seasonal migrants, while only a minority (20.8%) hold permanent positions in the kiln. Traditionally, Nepal has been a male dominated in terms of household decision making, which is often rooted with patriarchal norms. However, there has been gradual shift due to labor migration. In the brick kilns 89% of households had male heads and merely 11% had female heads. Female household heads were more prevalent in cases of unmarried and divorced women.

Facilities provided by the industry

The majority of the respondents (74%) lived in the industry quarters provided by the kilns, while 21% live in rental houses and 5% in their own houses. 10% of the workers resided in the industry quarter for more than 5 year whereas 43% for lived there for 1-5 years and 47% of the workers had lived in industry quarters for less than 1 year. Industry quarters, commonly referred to as "jhyuali," are basic housing accommodations provided by the kilns. These quarters consist mainly of brick, tin, and bamboo structures with limited ventilation. 64% of respondents experienced extreme heat and heavy rainfall in these quarters as they also lack separate kitchen and dining spaces (80%). Most respondents are seasonal migrants. As for the number of workers living in residence areas,

Basic Amenities and Facilities:

- Toilet Facilities: 32% of the workers had access to a toilet facility on-site, whereas 79% of the workers were using shared common toilets. This practice was very challenging to female workers as they had inadequate WASH facilities such as clean and accessible toilets, safe and private washing area, proper disposal system for their menstrual waste products and facilities for maintaining hygiene.

- **Drinking Water:** 66% of the workers had access to public taps, while 56% use bottled/jar water, 27% rely on protected wells, and 15% dependent on water tankers. Majority of the workers were aware of the water quality issues and preferred filtration methods before consuming waters.
- **Electricity and Internet:** 28% of the workers had access to electricity, which were manually connected. Cellphones were owned by 80% of the workers, whereas maximum 70% of them had access to internet. The use of cellphones and internet was utilized for entertainment purpose by the workers.
- **Medical Facilities:** Medical facilities at the brick kilns workplaces were inadequate and not well-equipped. Workers' awareness regarding medical insurance and compensation were limited and regular checkups for workers was minimal. Medical insurance coverage was limited to a specific season, lasting 6 months (from October to May). Surprisingly, a significant portion of workers (40%) were unaware of this medical insurance provision, indicating a lack of clear communication and information dissemination in the workplace. In cases of workplace accidents and injuries, the industry offered basic compensation.

Occupational Health and Safety:

Regarding safety equipment majority of the respondents (78%) stated that there was no provision of personal protective equipment (PPE), workers often had to buy their own PPE at their own expense. 70% of the workers stated that the work environment was very uncomfortable due to high temperatures, dust, and physical strain. Workers engaged in stacking, firing, transporting, and molding face higher risks. Workers themselves were responsible for managing and disposing of their household-generated solid waste (90%) due to the absence of proper waste disposal facilities at the kilns. Despite these challenges, workers showed adaptability and satisfaction, as they were provided with amenities which were not available in their home regions

Welfare Facilities and Physical Environment:

The majority of the workers were responsible for arranging their own transportation to return back home only 13% of workers received transportation facilities provided by the brick kilns. An overwhelming 90% of the workers lacked written employment contracts. The major finding was the role of “naike” recruiting agents, usually men had power and control over the workers in the

kilns. Many workers relied on these agents for their well-being and weren't concerned about formal agreement.

Regarding the physical environment, the working conditions were extremely challenging for the workers as they had to work in scorching heat, and the working situation became tougher as they had to work with wet clay, dust, and smoke in high temperatures. This combination made their work even more complex and uncomfortable, especially during tasks like stacking and firing. Moreover, there were also no safe spaces available for children when they were not in schools and their parents were working, which made the situation even more worrying. Workers also faced difficulties in disposing of their household-generated waste, with 90% of workers had to manage their own waste due to a lack of proper waste collection facilities from the kiln.

A person's or family's economic condition is determined by how much they can earn, spend and save. When an individual earns a stable income, it helps them maintain their economic status over time. The per day salaries of workers at the kiln ranged from Rs. 500 to Rs. 1000, depending on their job and without considering overtime pay. Significant proportion of workers earned between Rs. 10,000 and Rs. 12,000 per month, workers were unable to sustain their household expenditures because they did not receive their salaries on time. The delay happened because the “naike” the middleman who managed the workers, was in charge of paying them instead of the kiln owners. In brick kilns, which is an informal workplace, workers usually expect to be paid every day or every week, but when they are not paid on time it becomes very difficult to support their families. Majority (62%) of the workers did not save their earnings in any financial organizations, which clearly shows limited financial literacy.

Different workers have their own assigned task and work schedule. Stacker and loaders were considered as skilled workers as they were responsible to arrange bricks in correct placement before and after firing process and also segregated damaged bricks from the production. Their daily time schedule started from 7AM to 11AM and then from 2PM to 5PM. Male workers earned Rs. 800 to Rs. 1000 per day based on their assigned task, whereas female workers receive Rs. 500 to Rs. 800 per day in a similar manner. During midday break women often completed their household chores whereas for transporters they worked a 9AM to 5PM schedule to transport the brick their earning dependent upon the number of trips they make each day. Manager and supervisors also worked from 9AM to 5PM and earned 25,000 to Rs. 30,000 per month.

Regarding job security 69% of the workers expressed working at the kilns were insecure as they were often engaged in informal seasonal employment, despite hard working condition and job insecurity 58% expressed job satisfaction, while 42% were dissatisfied mainly due to untimely payment issues and inadequate basic facilities. 11% of the workers reported instances of discrimination and abuse for verbal mistreatment and unequal pay for similar work.

5.3 Discussion

Production of clay bricks is a physically demanding occupation where workers are exposed to difficult working and living conditions. Findings of the study showed that majority of the workers, were males representing age between 25-35 years, which is similar to the result of previous studies involving brick labors (Paudel , 2016). The kiln workers were seasonal migrants, this finding was supported by (Karki , 2020) which revealed that workers travelled from rural areas to work in brick kilns, especially from Mid- Western Development Region – Rapti Zone (Rolpa, Dang and Salyan). This trend of a higher proportion of seasonal migrants has remained consistent over time as the labor demand in brick kilns are high, the labor force primarily includes seasonal migrants to meet its operational needs. The workers reside in the industry quarter, where their living condition was subpar with inadequate basic amenities, ventilation and exposure to extreme weather conditions. This results align with a similar study (Gahlot , Rana , & Singh , 2020) emphasizing on proper housing facilities and hygienic living conditions in the brick kilns. Despite these unfavorable situation, workers expressed satisfaction with the living conditions as they were provided with a job, place to stay, electricity and cooking sources which were lacking in their home regions.

Regarding occupational health and safety, workers had no provision of personal protective equipment (PPE) and were engaged in uncomfortable hazardous work environment due to lack of health and occupational safety knowledge (Bajracharya , et al., 2022). The labor rule (MinErgy, 2017) also highlights the importance of workplace health and safety including, including proper ventilation, waste management, clean water supply, and gender-segregated sanitation facilities.

According to the dependency theory, the workers and the owners are equally dependent upon each other, despite their interdependence workers are paid no more than their marginal productivity whereas the owner earns all the profit (Greenlaw, Shapiro, & MacDonald, Wages and Employment in an Imperfectly Competitive Labor Market, 2022). Job security does not exist for the BK workers as they are not provided with any written contract or agreement, putting them in an informal work

setting. The main reason behind lack of job security was due to brick production being a seasonal activity as workers may witness periods of unemployment or reduced working hours during off-seasons. The brick kiln industry is a highly exploitative industry; workers struggle economically due to wage disparities. In order to decrease this practice fair employment conditions must be established and implemented at the kilns (MinErgy, 2017).

The workers had no fixed work pattern, most of the workers' wages were piece-rated. They were paid for the number of bricks they made, loaded and transported per day. So, the workers preferred to work according to their convenience, they start their work in early mornings, rest during the noon and again continue to work till dusk. Existing research suggests that long working hours have negative impact on workers mental health, well-being and productivity (Bajracharya, et al., 2022). The "8-8-8 balance model", by (ILO, 2009) is a significant framework for organizing work schedules for the workers with the aim to enhance productivity, workers well-being and family responsibilities.

5.4 Conclusion

In this study total sample of 47 respondents was considered and considering the information from these samples the result regarding their LWCs was assessed. In selected brick kilns, workers LWCs were substandard, even after working for more than 8 hours a day they still faced financial difficulties. Residing in the kiln fields, these laborers are compelled to work in any given situation. They were simply getting exploited with long working hours, poor work conditions and an absence of basic facilities. Workers lacked in financial and medical literacy. They were unaware of any medical schemes present at kiln. First aid facility was absent at any of the work sites. Provision of PPE was not found. Workplace hygiene was not up to standard. The living conditions of the workers were substandard but there have been improvements made in certain indicators such as access to electricity, water and housing. Job security was virtually nonexistent for the brick kiln workers. They were not provided with any written contracts or agreements, placing them in an informal work setting. The primary reason for this lack of job security was the seasonal nature of brick production. Workers often experienced periods of unemployment or reduced working hours during off-seasons. Nevertheless, these improvements were still below in providing a decent living condition for the workers. Despite the harsh conditions and exploitation, they faced, 58 % of the workers expressed satisfaction with their situation, because they were able to earn and access

minimal necessary facilities and housing accommodations that were not available in their home region.

The study offers interesting insights on how brick kilns operate with limited transparency. Workers were paid differently for the same work, money from their wage was deducted for excessive use of electricity and cooking fuel. This represents the exploitative living and working condition present in the kilns. Yet individuals are attracted to the freedom of entering informal brick sector, as it offers opportunities of financial gain to people having few marketable skills. To capitalize these opportunities, transparency must be maximized in terms of openly sharing information regarding living conditions, access to basic amenities, wage structure, working hours and conditions, payment methods and safety measures as it helps to rectify issues such as wage disparities, exploitative practices which can lead to improved LWCs for the workers at the kiln.

5.5 Input, Output and Outcomes

This comprehensive table presents an overview of living and working conditions in the brick kilns, along with recommendations, actions, and expected outcomes. It addresses factors such as workplace safety, wages and compensation, working hours, health and hygiene, job security, communication, workplace discrimination, housing quality, privacy, safety and security, sanitation, waste management, access to clean water and electricity, food facilities, education and childcare, and financial stability through savings and microfinance options. This table serves as a reference to interested authorities in addressing and mitigating the challenges and hardships faced and endured by the brick kiln workers.

Based on the findings from this, the following actions may be taken to address the presented issues.

Working Condition (Issues)	Recommendations (Inputs)	Actions (Outputs)	Expected Outcomes
Workplace Safety	Implement and enforce labor laws and safety regulations	Provide training on workplace safety. Ensure availability of protective equipment's to the workers	Reduced workplace accidents and sickness. Health of the workers is improved
Wages and Compensations	Ensure fair wages and timely remunerations to the workers.	Execute regular payments according to the stated wage standards. Establish transparent and timely payment system	Increased sustainable financial stability. Wage disputes are reduced between the employers and the workers. Worker dissatisfaction reduced
Working Hours and Workloads	Regulate working hours and provide rest breaks.	Working hours segregation (daily and weekly)	Better work – life balance. Decrease in worker fatigue

Health and Hygiene at Worksite	Ensure access to health facilities and hygiene support.	Establish on- site medical posts. Promote hygiene education and access to clean water. Ensure availability of basic medical supplies and first aid kits	Improved health management reduced sick days – healthy workers. Workers having access to timely medical attention
Job Security	Provide job stability and contract clarity by providing agreement and contract papers	Offer formal employment contracts with clear terms	Reduced fear of job loss, increased worker loyalty
Communication	Facilitate effective communication in workplace	Communication between workers and management	Improved workplace relations, problem-solving
Workplace Discrimination and Abuse	Promote an inclusive and non-discriminatory environment	Address any instances of discrimination	Enhanced worker morale

Living Condition (Issues)	Recommendations (Input)	Actions (Output)	Expected Outcomes
Housing Quality	Improve housing facilities.	Upgrade sustainable housing structures to ensure safety and durability. Provide proper ventilation, and lighting	Enhanced living conditions, improved safety and comfort
Privacy and Space	Improve privacy and living space with safety.	Ensure adequate space for families. Design living	Improved living comfort, enhanced well-being

		quarters that provide privacy and safety	
Safety and Security	Guarantee safety and security in living areas.	Train workers in emergency procedures. Install security measures such as security cameras and lightings especially during nighttime	Improved safety, reduced crime
Sanitation Facilities	Provide proper sanitation facilities	Construct segregated clean and functional toilets and bathing area for men and women. Promote regular cleaning and maintenance among the workers. A separate disposal area for women menstrual hygiene products.	Better hygiene, reduced health hazards
Waste Collection and Storage	Set up organized waste collection points within the kiln area	Designate specific areas for waste collection within the kiln premises. Ensure waste bins are regularly emptied and maintained.	Cleaner work and living areas, reduced litter.

Access to Clean Water Facility	Water pipes installation which provides access to clean water	Installation of reliable water sources within the premises kiln premises. Aware workers regarding controlled usage of water	Reduced risk of waterborne diseases
Electricity and Lighting	Build reliable electricity lines and lightings for the workers	Installation and distribution of electricity through local electricity grids. Lightings in common area and housing units	Increased safety (reduce accidents enhance productivity) at night (better movement and visibility) quality of life improved. Enhance comfort in living quarters.
Food and Cooking Facilities	Access to nutritious food, safe and functional cooking spaces.	Facilitate access to affordable food options, cooking areas with proper ventilation and safety measures, with proper cooking utensils and equipment.	Improved overall health, food safety, improved cooking conditions
Education and childcare	Offer childcare services for younger children and provide flexible schooling systems (in schools nearby the kilns and	Set up functional schools and childcare for children of workers.	Improved literacy, ensured learning continuity and child well-being

	in their hometowns) that accommodate the children of brick workers		
Saving and Microfinance	Promote savings and microfinance options	Encourage workers to invest and save. Educate workers regarding the benefits budgeting, saving, managing finance and investment	Increased financial stability and security. Improved financial management

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APPENDIX A: Consent form

“Assessing the living and working conditions of brick kiln workers in Bhaktapur District”

Survey Consent

Respondent: Workers/ Labors in Brick Kilns

Informed consent,

Namaste, my name is Aakriti Kayastha. I am an undergraduate student pursuing my Bachelors in Community Development in Kathmandu University School of Arts. As part of my final year research, I am conducting an individual research study titled **“Assessing the living and working conditions of brick kiln workers in Bhaktapur District”**.

Your involvement in this study is entirely voluntary. It is up to you to decide whether or not to take part in this study. There will be no direct benefit to you for your participation in this study. However, we hope that the information obtained from this study will be significant in making recommendations and suggestions to concerned stakeholders in improving the living, working, well-being and overall development of workers residing in brick kilns.

The information and response collected from you will be kept confidential and anonymous and your identity will not be revealed in the final report. The collected information will be used for study purpose only.

Do you agree to participate in this study?

Agree to participate:

Disagree to participate (If disagree, interview is terminated):

APPENDIX B

"भक्तपुर जिल्लाका ईट भट्टामा काम गर्ने कामदारहरूको जीवन र कामका अवस्थाहरू को मौलिक
स्थिति मूल्यांकन"

जाँच परिणामका लागि सहमति

प्रतिक्रियादाता: ईट भट्टामा काम गर्ने कामदारहरू/श्रमिकहरू

सूचित सहमति,

नमस्ते, मेरो नाम आकृति कायस्थ हो। म काठमाण्डौ युनिभर्सिटी स्कूल अफ आर्ट्समा सामुदायिक विकासमा स्नातक पढ्दै गरेको एक स्नातक विद्यार्थी हुँ। मेरो अन्तिम वर्षको अनुसन्धानको भागको रूपमा, म **"भक्तपुर जिल्लामा ईटा भट्टा कामदारहरूको जीवन र कामको अवस्थाको मूल्याङ्कन"** शीर्षकको व्यक्तिगत अनुसन्धान अध्ययन गरिरहेको छु।

यस अध्ययनमा तपाईंको संलग्नता पूर्णतया स्वैच्छिक हो। यो अध्ययनमा भाग लिने वा नलिने निर्णय गर्ने कुरा तपाईंमा निर्भर छ। यस अध्ययनमा तपाईंको सहभागिताको लागि तपाईंलाई कुनै प्रत्यक्ष लाभ हुनेछैन। तर, यस अध्ययनबाट प्राप्त जानकारीले ईटा भट्टामा बसोबास गर्ने श्रमिकहरूको जीवन, काम, कल्याण र सर्वाङ्गीण विकासका लागि सम्बन्धित सरोकारवालाहरूलाई सिफारिस र सुझाव दिन महत्वपूर्ण हुने विश्वास लिएका छौं।

तपाईंबाट सङ्कलन गरिएको जानकारी र जवाफ गोप्य र बेनामी राखिनेछ र अन्तिम प्रतिवेदनमा तपाईंको पहिचान खुलाइने छैन। संकलित जानकारी अध्ययन उद्देश्यको लागि मात्र प्रयोग गरिनेछ।

के तपाईं यस अध्ययनमा भाग लिन सहमत हुनुहुन्छ?

सहभागी हुन सहमत:

सहभागी हुन असहमत (असहमत भएमा अन्तर्वार्ता रद्द गरिन्छ):

APPENDIX C

Section A: Demographic Information (खण्ड A: जनसांख्यिकीय जानकारी)

1. Name (नाम):
2. Age (उमेर):
3. Gender (लिङ्ग)
 - a. Male (पुरुष):
 - b. Female (महिला):
4. What is your religion? (तपाईंको धर्म के हो?)
 - a. Hindu (हिन्दू)
 - b. Buddhist (बौद्ध)
 - c. Christian (क्रिस्चियन)
 - d. Kirat (किरात)
 - e. Islam (इस्लाम)
 - f. Atheist (नस्तिक)
5. What is your caste? (तपाईंको जात के हो?)
 - a. Brahmin/Chettri (ब्राह्मण/क्षेत्री)
 - b. Magar (मगर)
 - c. Rai (राई)
 - d. Newar (नेवार)
 - e. Tamang (तामाङ)
 - f. Others (अरू)
6. What is your highest completed education? (तपाईंले पुर गर्नु भएको माथिल्लो तहको शिक्षा कति हो?)
 - a. Illiterate (निरक्षर)
 - b. Primary Level (1-8) (प्राथमिक स्तर 1- 8)
 - c. Secondary Level (9-12) (माध्यमिक तह)

- d. Higher Level (उच्च स्तर)
 - e. Vocational Education (व्यावसायिक शिक्षा)
7. What is your current marital status? (तपाईंको हालको वैवाहिक अवस्था कस्तो छ?)
- a. Married (विवाहित)
 - b. Widowed (विधवा)
 - c. Separated (छुट्टिएको)
 - d. Divorced (छुट्टिएको)
 - e. Never married (कहिल्यैबिहे गरेन)
8. What is your place of origin? (8. तपाईं कहाँबाट आउनु भएको?)
9. What is your work status? (तपाईंको कामको स्थिति के छ?)
- a. Permanent (स्थायी)
 - b. Seasonal (मौसमी)

Section B: Living Condition (खण्ड B: बस्ने अवस्था)

1. Who is the household head? (घरको मुखिया को हो?)
- a. Male (पुरुष)
 - b. Female (महिला)
2. How many people live in your household? “By household I mean individuals who eat from the same kitchen” (तपाईंको घरमा कति जना मानिस बस्छन्? “घरपरिवार भन्नाले ति व्यक्ति जो एउतै चुल्हो भाडामा पकाएको खान्छन्
- a. Less than 4 (४ भन्दा कम)
 - b. 4-5 (४-५)
 - c. 6 or more (6 वा बढी)
3. Do you have children? (के तपाईंका बच्चाहरू छन्?)
- a. Yes (छ)
 - b. No (छैन)
4. If yes, how many children do you have? (यदि छ, भने, तपाईंका कति जना बच्चाहरू छन्?)

5. Do they go to school? (बच्चाहरू विद्यालय जान्छन्?)
 - a. They go (जान्छन्)
 - b. No, they don't (जादैन)
6. If yes, number of children going to school? (जन्छन् भने कति जना जन्वना बिद्यालय)
7. Number of earning adults in a household: (परिवार मा कति जना ले कमाउनु हुन्छ)
8. How much is your household expenditure monthly? (तपाईंको घरायसी खर्च मासिक कति छ?)
 - a. Less than 10,000 (१०,००० भन्दा कम)
 - b. 10,000 - 12,000 (१०,००० - १२,०००)
 - c. 12,000 – 15,000
9. (Housing Conditions) Residence of labors (आवास अवस्था) श्रमिकहरूको बसोबास
 - a. Rental House (भाडाको घर)
 - b. Owned House (आफ्नै घर)
 - c. Industry Quarter (उद्योग क्वार्टर)
10. What is your place to live made up of “including flooring and walls”? (तपाईंको बस्ने ठाउँ केस्ले बनेको हो?)
 - a. Cement (सिमेन्ट)
 - b. Brick (ईट)
 - c. Metal roofing (धातु छत)
 - d. Bamboo (बाँस)
11. How long have you lived in this residence? (तपाईं यो घर मा बस्नु भएको कति समय भयो?)
 - a. Less than a year (एक वर्ष भन्दा कम)
 - b. 1- 5 years (1-5 वर्ष)
 - c. More than 5 years (५ वर्ष भन्दा बढी)
12. How many rooms in this household are used for sleeping? (तपाईंको घर मा सुत्न को लागि कति वटा कोठाहरु प्रयोग गरिन्छ?)
13. Does the rooms have proper ventilations (Do you have windows in your room)? (तपाईंको कोठामा झ्यालहरू छ?)

- a. Yes (छ)
 - b. No (छैन)
14. (Weather Conditions) Does heavy rainfall or harsh sun affect your living condition? (मौसम अवस्था) के भारी वर्षा वा कडा घामले तपाईंलाई गारो भएको छ?)
- a. Yes (गरेको छ)
 - b. No (गरेको छैन)
15. What type of fuel does your household mainly use for cooking? (तपाईंको घरपरिवारले मुख्यतया खाना पकाउन कुन प्रकारको इन्धन प्रयोग गर्छ?)
- a. Electricity (बिजुली)
 - b. Liquefied petroleum gas (LPG) (पेट्रोलियम ग्यास)
 - c. Wood (दाउरा)
 - d. Kerosene (मतितेल्ह)
 - e. No food cooked in the household (घरमा खाना पकाएको छैन)
16. Do you pay for this fuel yourself? (के तपाईं आफैले यो इन्धनको लागि तिर्नु हुन्छ?)
- a. Yes (Own expenses) (हो (आफ्नै खर्च))
 - b. No (provided by the industry) (होइन (उद्योग द्वारा प्रदान गरिएको))
17. Do you have separate room that is used as a kitchen and dining? (के तपाईंसँग छुट्टै कोठा छ जुन भान्सा र भोजनको रूपमा प्रयोग गरिन्छ?)
- a. Yes, separate room (छ)
 - b. No separate room (छैन)
18. What kind of facilities are provided by the industry at the place of stay? (बस्ने ठाउँमा उद्योगले कस्तो सुविधा उपलब्ध गराएको छ?)
- a. Toilet System (शौचालय प्रणाली)
 - b. Drinking water facility (पिउने पानी सुविधा)
 - c. Electricity (बिजुली)
 - d. Transportation for mobility (गतिशीलता को लागी यातायात)
 - e. Medical/ First Aids (चिकित्सा / प्राथमिक उपचार)

- f. No Facilities (कुनै सुविधा छैन)
19. Is there separate toilet for male and female? (के पुरुष र महिलाका लागि छुट्टाछुट्टै शौचालय छ?)
- Yes (छ)
 - No (छैन)
20. Does the female toilet have necessary WASH facility (e.g., soap, dustbin for disposal for menstrual products, tap for washing hands)? (के महिला शौचालयमा आवश्यक सुविधा छ (जस्तै, साबुन, महिनावारीका सामानहरू फाल्ने डस्टबिन, हात धुने धारा)?)
- Yes (छ)
 - No (छैन)
21. (For women respondents) What menstrual hygiene product do you use? (तपाईं महिनावारी हुदा के प्रयोग गर्नु हुन्छ?)
- Sanitary pad (सेनेटरी प्याड)
 - Cloth (कपडा)
 - Reusable pad (पुनः प्रयोज्य प्याड)
 - Others (अरू)
22. Where do you dispose your menstrual hygiene products? (तपाईं आफ्नो महिनावारी स्वच्छता उत्पादनहरू कहाँ डिस्पोज गर्नुहुन्छ?)
- Dispose them in dustbin (तिनीहरूलाई डस्टबिनमा फाल्ने)
 - Burning (जल्दै)
 - Dispose them into community rubbish (तिनीहरूलाई सामुदायिक फोहोरमा फाल्ने)
 - Buried underground (जमिनमुनि गाडियो)
23. What kind of toilet facility do member of your household usually use? (तपाईंको घरका सदस्यहरूले सामान्यतया कस्तो प्रकारको शौचालय प्रयोग गर्छन्?)
- Flush to piped sewer system
 - Flush to septic tank
24. Do you share this toilet facility with another household? (के तपाईं यो शौचालय सुविधा अन्य घरपरिवारसँग साझा गर्नुहुन्छ?)

- a. Yes (गर्छु)
 - b. No (गर्दिन)
25. Where is the toilet facility located?
- a. In own dwelling (आफ्नै बस्ने ठाउँ मा)
 - b. Inside the yard/plot (आगन / कम्पाउन्ड भित्र)
 - c. Elsewhere (अन्यत्र)
26. What is the main source of drinking water for the members of your household? (तपाईंको घरका सदस्यहरूका लागि पिउने पानीको मुख्य स्रोत के हो?)
- a. Public tap/ standpipe (सार्वजनिक पाइप धारा)
 - b. Protected well (सुरक्षित ढाकिएको इनार)
 - c. Rainwater (वर्षाको पानी)
 - d. Tanker truck (ट्याङ्कर बाट लेर आएको पानी)
 - e. Bottle/jar water (बोटल/ जार पानी)
27. What is the main source of water used by the members of your household for cooking and handwashing? (तपाईंको घरका सदस्यहरूले खाना पकाउन र हात धुन प्रयोग गर्ने पानीको मुख्य स्रोत के हो?)
- a. Public tap/ standpipe (सार्वजनिक पाइप धारा)
 - b. Protected well (सुरक्षित ढाकिएको इनार)
 - c. Rainwater (वर्षाको पानी)
 - d. Tanker truck (ट्याङ्कर बाट लेर आएको पानी)
28. Do you do anything to the water to make it safer to drink? (के तपाईं पानी पिउन सुरक्षित बनाउन को लागी केहि गर्नुहुन्छ?)
- a. Yes, I do (गर्छु)
 - b. No, I don't (गर्दिन)
29. If yes, what safety measures are adopted to make the water safe to drink (e.g., filtration, boiling of water)
30. In past two weeks, was the water from this source not available for at least one full day? (विगत दुई हप्तामा, के यस स्रोतबाट पानी कम्तिमा एक दिनको लागि उपलब्ध नभएको थियो?)

- a. Yes (थियो)
 - b. No (थिएन)
31. How do you manage your household waste? (तपाईं आफ्नो घरको फोहोर कसरी व्यवस्थापन गर्नुहुन्छ?)
- a. Burning (जल्दै)
 - b. Timely collection by the industry (उद्योग द्वारा समयमै संकलन)
 - c. Disposal on your own (आफै फाल्न लाग्ने)
32. Do you have Personal cellphone? (के तपाईंसँग व्यक्तिगत सेलफोन छ?)
- a. Yes, I have (छ)
 - b. No, I don't (छैन)
33. Does the cellphone have access to the internet? (के सेलफोनमा इन्टरनेटको पहुँच छ?)
- a. Yes, I have (छ)
 - b. No, I don't (छैन)
34. Have you made any savings in any financial organizations? (तपाईंले कुनै वित्तीय संस्थामा बचत गर्नुभएको छ?)
- a. Bank (बैंक)
 - b. Micro finance (माइक्रो फाइनान्स)
 - c. No saving (बचत छैन)

Section C: Working Condition (खण्ड C: काम गर्ने अवस्था)

1. How many hours do you typically work per day in the brick kiln? (तपाईं सामान्यतया कति घण्टा ईटा भट्टामा प्रति दिन काम गर्नुहुन्छ?)
 - a. 8 hours (८ घण्टा)
 - b. 8-12 hours (८-१२ घण्टा)
 - c. 12-16 hours (१२- १६ घण्टा)
 - d. Above 16 hours (१६ घण्टा भन्दा माथि)
2. What type of work do you do in the kiln? (तपाईं भट्टामा कस्तो प्रकारको काम गर्नुहुन्छ?)

- a. Brick Making (preparing mud, molding, arranging, and laying bricks) (इँटा बनाउने (माटो तयार गर्ने, ढाल्ने, मिलाउने र इँटा बिछ्याउने)
 - b. Firing of the bricks (working inside the chimney) (इँटाको फायरिङ (चिमनी भित्र काम गर्दै)
 - c. Brick carrying, loading, and unloading) (इँटा बोक्ने, लोड गर्ने र उतार्ने)
 - d. Truck drivers (ट्रक चालकहरू)
 - e. Machine Operators (मेसिन अपरेटरहरू)
3. Were you provided with a written contract/ agreement paper before you work? (तपाईंले काम गर्नु अघि के तपाईंलाई लिखित सम्झौता/सम्झौता कागज प्रदान गरिएको थियो?)
- a. Yes (थियो)
 - b. No (थिएन)
4. How many days do you work per week in season? (तपाईं सिजनमा प्रति हप्ता कति दिन काम गर्नुहुन्छ?)
5. What is the working condition like inside the brick kiln? (इँटा भट्टा भित्रको काम गर्ने अवस्था कस्तो छ?)
- a. High Temperature (उच्च तापक्रम)
 - b. Lack of ventilation (वेंटिलेशनको अभाव)
 - c. Inadequate Lighting (अपर्याप्त प्रकाश)
 - d. Manual stacking and carrying heavy loads of bricks- hard physical labor (म्यानुअल स्ट्याकिंग र इँटाहरूको भारी बोक्ने)
6. Do you have access to proper safety equipment such as? (के तपाईंसँग उचित सुरक्षा उपकरणहरूमा पहुँच छ जस्तै?)
- a. Gloves (पन्जा)
 - b. Helmet हेलमेट
 - c. Boots (जुता)
 - d. Masks (मास्क)
 - e. No safety gears provided (कुनै सुरक्षा गियर प्रदान गरिएको छैन)

7. Do employers provide safety gears if they are damaged? (के रोजगारदाताहरूले क्षतिग्रस्त भएमा सुरक्षा गियरहरू उपलब्ध गराउँछन्?)
- Always (सधैं)
 - There is a limited number (त्यहाँ सीमित संख्या छ)
 - Never (कहिल्यै)
 - Need to purchase from personal expense (व्यक्तिगत खर्चबाट खरिद गर्न आवश्यक छ)
8. On what basis do you get paid? (तपाईं कुन आधारमा भुक्तानी पाउनुहुन्छ?)
- Per brick (प्रति ईट्टा)
 - Per trip (प्रति यात्रा)
 - Hourly (प्रति घण्टा)
 - Daily (दैनिक)
 - Weekly (साप्ताहिक)
 - Monthly (मासिक)
 - As per the contract (सम्झौता अनुसार)
9. What is the daily wage of male workers? (पुरुष कामदारको दैनिक ज्याला कति हो?)
10. What is the daily wage of female workers? (पुरुष कामदारको दैनिक ज्याला कति हो?)
11. How much is your monthly income? (तपाईंको मासिक आम्दानी कति छ?)
- Less than 10,000 (१०,००० भन्दा कम)
 - 10,000 - 12,000 (१०,००० - १२,०००)
 - More than 12,000 (१२,००० भन्दा बढी)
12. Do you get your remuneration on time? (के तपाईं तपाईंको भुक्तानी समयमा पाउनुहुन्छ?)
- Timely remuneration (समयमै भुक्तानी)
 - Untimely remuneration (समयमै भुक्तानी)
13. Do you get additional remuneration for working overtime? (के तपाईं अतिरिक्त भुक्तानी पाउनुहुन्छ ओभरटाइम कामको लागि?)
- Yes (पाउछ)
 - No (पाउदैन)

- c. Don't know (थाहा छैन)
14. Have you experienced any instances of verbal or physical abuse in the workplace? (के तपाईंले कार्यस्थलमा मौखिक वा शारीरिक दुर्व्यवहारको कुनै घटनाहरू अनुभव गर्नुभएको छ?)
- a. Yes (गरेको छु)
- b. No (गरेको छैन)
15. Who pays for the workplace related accidents/sickness? (कार्यस्थल सम्बन्धित दुर्घटना/बिरामीको लागि कसले भुक्तानी गर्छ?)
- a. Employers (from the industry) (रोजगारदाता (उद्योगबाट))
- b. Personal expenses (व्यक्तिगत खर्च)
16. Do you have health and medical insurance? (के तपाईंसँग स्वास्थ्य र चिकित्सा बीमा छ?)
- a. Personal Insurance (व्यक्तिगत बीमा)
- b. Insurance by the industry (व्यक्तिगत बीमा)
17. Are you provided with any benefit such as occasional or paid leaves? (के तपाईंलाई भुक्तान पातहरू जस्ता कुनै फाइदाहरू प्रदान गरिएको छ?)
- a. Yes (गरेको छु)
- b. No (गरेको छैन)
18. Is the job secured every year? (प्रत्येक वर्ष जागिर सुरक्षित हुन्छ?)
- a. Yes (हुन्छ)
- b. No (हुदैन)
19. If seasonal migrant, Does the industry provide you transportation facility (managing vehicle or fare) to return back home? (मौसमी आप्रवासी भएमा, के उद्योगले तपाईंलाई घर फर्कन यातायात सुविधा (गाडी वा भाडा व्यवस्थापन) उपलब्ध गराउँछ?)
- a. Yes (गराउँछ)
- b. No (गराउँदैन)
20. Are you satisfied with the overall working conditions in the brick kiln? (Job satisfaction) (के तपाईं ईँटा भट्टामा काम गर्ने समग्र अवस्थसँग सन्तुष्ट हुनुहुन्छ? (कामप्रति सन्तुष्टि))
- a. Satisfied (सन्तुष्ट)

b. Unsatisfied (असन्तुष्ट)

21. What is the reason for dissatisfaction? (असन्तुष्टिको कारण के हो?)

- a. Workplace conflict (with employer and other labors) (कार्यस्थल द्वन्द्व (नियोक्ता र अन्य श्रमिकहरूसँग झगडा)
- b. Untimely payment (समयमै भुक्तानी)
- c. No job security (कामको सुरक्षा छैन)
- d. No motivation to work (काम गर्ने प्रेरणा छैन)
- e. Unequal treatment (असमान व्यवहार)
- f. Lack of workplace facilities (कार्यस्थल सुविधाको अभाव)

22. Are there any specific improvements or changes you would like to see in the working conditions? (के त्यहाँ कुनै विशेष सुधार वा परिवर्तनहरू छन् जुन तपाईंले काम गर्ने अवस्थाहरूमा हेर्न चाहनुहुन्छ?)

- a. If yes, what kind of changes? (यदि छ भने, कस्तो प्रकारको परिवर्तन?)

APPENDIX D

Observation Checklist

Observation checklist: Working and Living Condition of Brick Kiln Workers
Date:
Observer: Aakriti Kayastha
Location: Brick Kilns in Bhaktapur

Instructions:

This checklist is designed to observe and document the working and living conditions of brick kiln workers in Bhaktapur district. The observer must carefully evaluate each item and record any observations or relevant information. Use "Yes" or "No" to indicate whether the condition is present or not and provide detailed comments if necessary.

No.	Observation Item	Yes	No	Comments/ Remarks
1.	Housing Facilities: Spacious living quarter which is structurally sound			
2.	Housing area are clean and free from any hazards			
3.	Shelters have adequate ventilation (windows and doors) and lightings			
4.	Space and Privacy: Enough space for the workers and their family			
5.	Separate room for sleeping, cooking, dining, and personal hygiene (showers)			
6.	Communal area for socializing or recreational activities			
7.	Availability of toilet facilities (are they clean and hygienic)			

8.	Reliable and sufficient water supply for drinking, cooking, and washing purposes?			
9	Arrangement for proper waste disposal			
10.	Health and Safety: Access to basic healthcare facilities and first aid			
11.	Provision of protective gears such as masks, gloves or any other safety equipment if needed			
12.	Amenities and Basic Necessities: Electricity for lighting and cooking purpose			
13.	Cooking equipment and fuel			
14.	Arrangement of clean drinking water			
15.	Day care for children of brick kilns			
16	Community: Sense of community among the workers			
17.	Recreational or cultural activities done or organized by/for the workers			
18.	Distance of living quarter from the actual brick kiln worksite			
19.	Hazards associated with the proximity of the living area to the kiln			
20.	Measures in place to protect workers from excessive heat, dust, or other work-related risks			

