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Health Conditions of Women Working in Brick Kilns in South Punjab: A Phenomenological Study

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Abstract:

Focusing on the lived experiences of women working in brick kilns in South Punjab, this study highlights their health conditions. For this study, three districts i.e., Rajanpur, Dera Ghazi Khan and Muzaffargarh were selected. By using purposive sampling and Edmund Husserl's transcendental phenomenology, twenty-five (25) interviews with brick kiln women workers were conducted. Data were analyzed through Interpretative Phenomenological Analysis. Findings of the study revealed that generally, women working in brick kilns are facing health issues such as breathing problems, cough, respiratory problems, kidney issues, tuberculosis, skin allergies, hepatitis, piles, muscles and joint pain due to specific postures, heart problems due to dust and heat exposures, drinking of contaminating water along with soil deterioration in the environment of brick kilns. Although all the persons working in brick kilns are exposed to health risks due to hazardous working environment, women and newborns are particularly vulnerable. Pregnant women, mothers, newborns require nutritious diet for better immunity to fight diseases, but for many, managing even simple meal for two times a day is a daunting task.

***Keywords*:** Women in brick kilns, debt-bondage, *Peshgi* system, health conditions

Introduction:

Globally, about 1.5 trillion bricks are twisted per year, with annual production in Pakistan constituting 3% of global brick production (Rauf et al., 2022). In South Asia, Pakistan is the third biggest manufacturer of bricks (Khan et al., 2019). Pakistan's brick kiln sector is greatly informal and is liable for 1.5% of the country's gross domestic product (Sharma, 2021). This sector is considered the second highest end user of coal for a total (41%) of coal consumption (Lin & Raza, 2020).

Generally, workers in this sector perform work from October-November to May-June in brick kilns. The kilns are closed during the monsoon season and in periods of harsh weather (seasonal work). During the off-season work, they are usually engaged in agronomic work, construction work, or they work as domestic servants etc. Women workers in brick kilns sometimes do not do any labor while reverting home and spent all earned cash during the off-season. Workers who do not inherit any property or have no apartment for residence remain in rooms at the kiln settings throughout the off-season. As kiln workers receive wages on a piece-rate basis, at times of off-season in brick kilns, either for a day or a month, workers remain

unable to find earnings. In this off-season period, workers remained dependent on the brick kiln owners and had to take further loan or advance to meet their financial necessities which added to their previous outstanding payments and consequently increased their debt (Shah, 2008). Sometimes, different states of affairs, e.g., marriage ceremonies, cremations, accidents, downpours bring superfluous expenses leading to enhanced debt. The debt is inherited from parents to their children discouraging their education (Iqbal, 2006). In such case, landowners embrace child labor in view of the upsurge in production levels. In fact, children have to endure in the same occupation to recompense the 'eternal debt' owed by lineage (Haider & Patra, 2021). A few studies have displayed that employers force the children of employees to labor in the same situation as their parents to help pay off their parents' debt or when parents or family members pass away, employers require another body to fill the lost role—all under the pretense of a debt owed (Usman et al. 2020). In the context of debt bondage, however, these transfers become the channel through which participation in interlinked transactions by one generation can set off a sequence of increasing indebtedness that affects welfare and the ability to break free from debt bondage for all subsequent generations (Nandwani, 2020).

As per information shared by the Department of Labor and Human Resource, Government of the Punjab, it is estimated that an average of thirty to thirty-five (30-35) families are deployed at each brick kiln, with an average family size of seven (07), with at least three (03) of the family members being children. Hence, two hundred and ten (210) people on average are covered per brick kiln or more than two thousand people for every ten brick kilns (Aftab, 2019). Bonded Labor Liberation Front (BLLF) reported that about 7,890,000 of the bonded labor are occupied at brick kilns in Pakistan (Maan, 2023). The broadly prevailing form of forced labor is debt bondage (Ercelawn & Nouman, 2001) and it is becoming a serious problem in Pakistan (Akhtar et al., 2022). Punjab and Sindh are considered the "hot spots" of bonded labor in the brick-making sector (Daily Times, 2020). The Walk Free Foundation (2023) placed Pakistan at third (3rd) out of 167 countries with entrenched slavery. The Global Slavery Index (GSI) estimates that 3,186,000 people are seized in modern forms of slavery in Pakistan.

In brick kilns and agronomy, families act as a sole unit. Currency earned by woman rewarded straight to their male member of the family. The state of women in bondage is greatly susceptible to men (Haider & Patra, 2021). Females have been working the longest hours as men do, but 96% of owners did not offer equal wages to male and female workers for homogeneous work (Dawn, 2016). Women have been not only oppressed by owner but also by their partners who claim both productive and reproductive labor from them. Women may be forced to work for little or no wages to repay the debts incurred by their spouses or male family members. Pakistan Institute of Labor Education and Research (2004) reported that like children and adolescents, women are occasionally acknowledged as laborers except when they inherit obligations for outstanding debts. Women have been facing excessive issues due to their generative biology. They have been facing difficulties maintaining hygiene during menstruation. Brick-kiln locations remained greatly detrimental for expectant mothers. Besides, maternity leave have not been provided to them (Human Rights Commission of Pakistan [HRCP], 2011) and have to likely to exert effort even during their pregnancy (Siddaiah et al., 2018). In addition, women remained in greater jeopardy of experiencing sexual (Dawn, 2016) and spousal violence (Rubab & Parveen, 2020). These confrontational working and living conditions lingered a source of eternal distress for them.

While focusing on the lived experiences of women workers in brick kilns, this study documents their health conditions. The study particularly examines how situations of debt-bondage, long working hours, lack of social protection and access to basic services shape the health conditions of women of reproductive age working in brick kilns in South Punjab.

Research Methodology

This paper draws upon a subset of a larger dataset focusing on the health conditions related lived experiences of women working in brick kilns in South Punjab, Pakistan. For this particular analysis, we utilize purposive sampling or judgmental technique (non-probability sampling) which is used to develop a sample purely on the prudence of the researcher, established by the nature of the study and the indulgence of the target interviewee (Creswell, 2007). Twenty-five (25) interviews are conducted with women workers across three districts: Rajanpur, Dera Ghazi Khan and Muzaffargarh. The research design is rooted into Edmund Husserl's transcendental phenomenology and qualitative approach that allows for an in-depth exploration of individual experiences (Eisenstein, 1999). Data analysis was conducted using Interpretative Phenomenological Analysis (IPA) as advanced by Jonathan Smith (Smith et al., 2008) which enables a nuanced interpretation of participants' perspectives. Furthermore, in-depth interviews were recorded, transcribed verbatim and subsequently translated from indigenous languages (i.e., Siraiki and Urdu) into English. A comprehensive qualitative data analysis was performed utilizing thick descriptions based on analytical induction, referential adequacy, steady contrast, and logical interpretations. Multiple readings of the transcripts facilitated the identification of key themes, encompassing similarities and discrepancies (Auerbach & Silverstein, 2003). This study was commenced after approval from the Punjab University Ethical Review Board. Ethical considerations e.g., rapport building, anonymity of the participants and confidentiality of the data were also confirmed throughout the research process and after the completion of data collection. Correspondingly, personal and interpersonal reflexivity were used as the key ethical considerations during the entire research process to lessen the bias (Finlay & Gough, 2008; Hennink, Hutter, & Bailey, 2010).

We have classified the data into three themes, including Nutrition Status of Brick Kiln Women Workers; Illness or Disease among Women Workers; and Marriage, Pregnancy and Medical Assistance.

1. Nutritional Status of Brick Kiln Women Workers:

Nutritional status can be described as an individual's well-being, shaped by the acquisition and application of nutrients (Todhunter, 1970). It represents the state of one's health as determined by the consumption of food, the fulfillment of nutritional requirements and the body's processing of these essential substances. A sound and nourishing diet serves as the fundamental cornerstone for achieving and maintaining optimal nutritional well-being. We explored the nutritional status of brick kiln women workers. Saira, a participant from Rajanpur expressed:

> Normally, I eat two to three meals comprising wheat and vegetables. I don't have enough money to buy milk, fruits and meat etc. Meat is cooked in our house whenever we have guests or whenever we have money. These foods are very healthy to increase immunity in our body but they are expensive too. For drinking water, we use a hand pump in the vicinity of brick kilns.

Shazia, a participant from D.G. Khan expressed:

> Usually, we eat simple food because we don't have enough money to afford good food. But when our circumstances get better, we also eat meat, fruits and milk. But now these days due to high inflation rate, we can hardly arrange simple food; good food is just something we think about. The primary source of drinking water is a hand pump.

Kanwal, a participant from Muzaffargarh expressed:

> Our conditions have always been tough. We manage two meals with great difficulty; often we experience starvation in our home. Many times, we do not have food in our home and often it happens that we have to eat bread with onions because we are unable to buy anything else. The primary source of drinking water is the water pump motor which is also used for making mud mixture.

This theme revealed that the majority of the women are able to manage two to three meals a day. They cannot afford healthy and nutritious diet. Some women hardly eat two meals a day due to lower earnings and a high inflation rate and the major source of drinking water was hand pumps or water pump motors.

2. Disease or Illness among Women Workers:

Illness can be described as the subjective perception of not feeling well characterized by discomfort, pain or altered physical and mental states. It encompasses an individual's personal experience of their health condition and can be influenced by cultural, psychological and social factors. It provides a holistic view of a person's state of un-wellness, encompassing their symptoms, emotions and perceptions of their health. In contrast, disease is a more objective term denoting a specific abnormal condition or disorder in the body or mind, featuring identifiable characteristics, signs, symptoms and underlying causes. Healthcare professionals typically diagnose diseases through medical examinations, tests and assessments as they often have a well-defined etiology, pathology and categorization based on specific criteria. So, illness reflects a person's personal perception and experience of his or her health, whereas disease is a medical condition diagnosed according to clinical criteria. We have explored the prevailing diseases or illnesses among brick-kiln women workers. Parveen, a participant from Rajanpur expressed:

> We have to make bricks in heat under the sunlight so that they could dry. When we work under the sunlight all the day, it makes our body warm and dehydrated. At the time, when I delivered my son a few months ago, doctors diagnosed me with hepatitis. Due to hepatitis, doctors have forbidden breastfeeding to my baby. We first fed him cow's milk or goat's milk but it didn't suit him and he became ill. So, the doctor prescribed formula milk. We are now giving the recommended milk to the baby but of a cheaper quality because we cannot afford good-quality formula milk. But buying formula milk has caused enormous financial burden for us.

Rizwana, a participant from Rajanpur expressed:

> “I am a heart patient and have piles. I am facing breathing and allergy problems due to working in dusty environment of brick kilns all the time". One more woman from Rajanpur expressed that "I have tuberculosis, cough and heart problems”.

Fatima, a participant from Rajanpur expressed:

> My muscles are cramping and my joints are aching. I bring the clay from one place to another in wooden carts to make bricks. I have a lot of pain in my muscles and bones because it has to be pulled very hard.

Kundan from D.G. Khan expressed that "We work and live in a dusty environment. But, our health is fine; there is no problem. One of us, a woman, has breathing problem when the fire is lit in the kiln and it emits smoke ethereal the rest of us sometimes get allergies too when the soil is bad".

She further added:

> No safety measures have been provided to us by the owner of the kiln but when there is dust and smoke or heat exposures, we as women protect our faces with shawls and our men cover their faces with the handkerchiefs which they wear. Although the owner did not provide us with any such things, we could prevent health-related issues.

Runina, a participant from D.G. Khan expressed:

> Currently, I am playing the role of *Jumadarni*[1]. Due to working in brick kilns, my husband's mental balance seems to be poor. My own health is also not good. I have kidney stones due to exposure of dust and my shoulder bone is broken too. So I can't do heavy work. I can't work in many other fields that require physical strength and here is a little bit of work which I can do. I have four children who are young. They do heavy work while light work is done by me.

Mubeen, a participant from Muzaffargarh expressed:

> My health is not good. I am facing breathing problems. I have pain in my joints and muscles. We are poor people who have no option but to work here because if we don't work, how we will arrange two meals for ourselves and our children. So, it is our compulsion to do the work here in the kilns.

Kaneez, a participant from Muzaffargarh expressed that "our health seems good. Yes, sometimes there is a breathing problem and skin allergies due to dust exposures and soil deterioration".

Saima, a participant from Muzaffargarh expressed that "my health is good while working in kilns but my husband has hepatitis due to dust, heat and drinking of contaminating water".

Kanwal, a participant from Muzaffargarh expressed that "I have hepatitis due to working in the kiln in the heat of the sun. So, firstly I took treatment and stopped working here but my other family members are still working".

She further added:

> By working in kilns, it is not the case that only men or women can get diseases like respiratory problems, kidney issues or any other issue related to health. Every person who works in the kilns whether man, woman, old man, old woman, girl or boy is equally susceptible to illness or disease.

[1] A head woman who has charge of the work or workers in a brick kiln.

This theme revealed that majorly women working in brick kilns are facing health issues such as breathing problems, cough, respiratory problems, kidney issues, tuberculosis, skin allergies, hepatitis, piles, muscles and joint pain due to specific postures, heart problems due to dust and heat exposures, drinking of contaminating water along with soil deterioration in the environment of brick kilns. Owners do not provide any safety or preventive measures related to health issues. Moreover, brick kiln workers, especially women, have little understanding how to prevent themselves in the hazardous working environment making them susceptible to illness or disease.

3. Marriage, Pregnancy and Medical Assistance:

All the participants of this study were married. Under this theme, we explore their experiences related to getting married and how they get access to health services while maintaining maternal, perinatal and newborn babies' health care.

Marriage as a social institution, typically involves individuals entering into marriage commonly known as spouses, partners or husband and wife, depending on the prevailing cultural and legal norms. In numerous societies, marriage symbolizes a dedicated relationship between two people often with the aim of establishing a family, sharing responsibilities and offering emotional and financial support to one another. The specifics of marriage encompass legal responsibilities and entitlements, i.e., property and inheritance rights, tax advantages and custody rights for children. It is essential to recognize that societal views and practices concerning marriage have transformed over time and continue to evolve, embracing various forms of partnerships. As, we have explored women's experiences related to getting married, Rizwana, a participant from Rajanpur expressed:

> I got married when I was at the age of puberty. When our parents marry their girls or boys, they don't ask for the companionship that their children want or not. Where parents think is right among their relatives, they fix the marriage. Some children's get engaged in their childhood and some get engaged at the time when they reach puberty.

Kundan, a participant from D.G. Khan expressed:

> I was married among my relatives at the age of puberty but after some years, my in-laws used to beat me. We were somehow financially stable but they would torture me. So I escaped from there and got divorced to get marry again to a person whom I liked and then we did elope marriage. I have one daughter from my first marriage and six children from my second marriage. Since I had my second marriage, my in-laws did not accept me to live with them. The girls who do elope marriages are treated with dishonor in our society. So, we are living separately.

Samina, a participant from Muzaffargarh expressed:

> I got married at a very young age. Our children are not asked for consent to marry. They have to get marry where their parents decide. In some cases, boys express their will to marry a girl from outside their family and insist on and then the *Watta satta or Shighar* marriage takes place which involved the mutual exchange of brides between two families. In this custom, during the marriage ceremony both the families engage in a reciprocal exchange of brides. In some cases, it is also demanded to transfer the land in exchange for the bride.

Women workers experiences related to marriage portrayed that usually endogamous marriages take place and exogamous marriages are less preferred and in some cases, *watta satta or Shighar* marriage is also preferred in both types of marriages whether endogamous or exogamous. Most of the children whether they are son or daughters, have their marriages fixed in their childhood when their parents consider it appropriate or in some cases marriages get fixed at the age of puberty. As far as consent for marriage is concerned whatever gender of that person is, usually families do not feel it important to seek their consent before finalizing the marriage proposal. Furthermore under this theme, we have explored how brick kilns women workers identify, get access to and receive health care facilities while maintaining maternal, perinatal and newborn babies' health care.

Maternal health encompasses the well-being of women throughout pregnancy, childbirth and the postpartum period (World Health Organization, 2019) while perinatal health pertains to the health of individuals from 22 completed weeks of gestation until 7 completed days after birth (World Health Organization, n.d.). Newborn health, on the other hand, pertains to the first month of an infant's life (World Health Organization, 2019). A favorable beginning during the perinatal phase has a far-reaching impact on infancy, childhood and adulthood. The significance of maternal, perinatal and newborn health is a matter of great importance to individuals, communities and nations. These issues should be regarded not only as fundamental human rights but also as essential elements of overall well-being. In this regard, Parveen, a participant from Rajanpur expressed:

> I am 35 years old. I have five children. My children are very young and the gap between them is very small. I thought about family planning and used different contraceptive methods but they didn't suit me. My health had deteriorated due to those family planning methods. So, I could not continue with the family planning. Moreover, during pregnancy, we eat whatever is available because we can't afford anything extra. I go to the government hospital for my delivery. They provide medical assistance to me which am needed. Usually, after 10–15 days of my delivery, I start working again in the kiln.

Khadija, a participant from Rajanpur stated:

> I am 49 years old. I have seven children and they are all married. The attitude of government hospital staff, especially doctors' behavior, is not nice to us. We go to government hospitals and doctors give us any simple medicine for different health issues on the basis of our CNICs. The medicine doesn’t cure us much. That’s why we have to go to private hospitals, clinics or dispensers to take medicines.

She further added:

> The medical profession is actually created for the relief of suffering humanity but now doctors have made it a business and a source of profit. Some of the doctors treat patients in government hospitals who also run their own clinics privately and charge heavy amounts for treatments. As they are doing the same treatment in private clinics with heavy fees, why can't they do it in government hospitals? Some of the doctors in the governmental hospitals are selling those medicines in private clinics which are officially given to people by the government.

Sumera, a participant from Rajanpur stated:

> I am 49 years old and I have 10 children who are all married now. I never used any methods to avoid pregnancy in my whole life. Some of my children were born at home and some of them were born in government hospitals. We never received my maternity leave from work to deliver the baby.

She further added:

> Public hospitals suffer from a shortage of fundamental resources and essential infrastructure, including a scarcity of beds, a lack of qualified medical professionals, inadequate medicine supplies, understaffing and subpar quality. Facilities provided there are cramped, cleanliness is substandard, restroom facilities are frequently blocked and patients endure extended wait times to access medical care.

Sughra, a participant from D.G. Khan said:

> My age would be around 40 years old. I have five children and never thought about family planning. During pregnancy, we tried to have a good diet. I also have a cow, so we drink the cow's milk. I eat and drink well so that I and my baby stay healthy. We don't normally go to the doctors for medical check-ups; if we have some minor health issues then we take care by ourselves. If we have major complications during pregnancy, then we obviously have to see a doctor.

She further added:

> We are not provided with any leave from work. I can't do much work before my delivery and have to take a break from the work and after 40 days of having a safe or normal delivery, I start work again. But in that entire period, my other household members continue to work.

Mukhtiyaar, a participant from D.G. Khan narrated:

> I am 24 years old and have 3 children. I am using methods to maintain gaps among my children. Usually, we all decide together from where to get health care. If I am sick, then I go to a nearby dispensary and tell the person there about the health issue and he gives us medicine. But for all my deliveries, I went to government hospitals. Private hospitals have good quality medical assistance but those are far too expensive.

Shameem, a participant, from D.G. Khan interpreted that "I am 48 years old and have six children. I never used any family planning method. My all the children were delivered at home by midwives in our hometown".

Mukhtiyaar, a participant from D.G. Khan explained:

> I have three kids and the youngest one is 3 months old. I have been using a method to avoid my next pregnancy but due to carelessness, I got pregnant again. I usually take advice from my mother. I had my first delivery in the hospital. Usually, when one of us has a health abnormality, we go to a nearby dispenser to get medicine.

Samia, a participant, from Muzaffargarh, expressed:

> I am 25 years old. I have five children and they are very young. Due to complications during my pregnancies, I have delivered all my babies by C-section in government hospitals. Health care quality in government hospitals is not good, but it is the only option that is available to us as we cannot think about expensive private medical facilities.

Bushra, another participant from Muzaffargarh, told:

> I am 48 years old and have seven children. I usually have to go for treatment to government hospitals because private clinics are far from our reach. Due to overcrowding of patients in government hospitals, doctors cannot give proper attention to patients and even don't have time to listen to their issues properly.

The data of this study indicate that tendency to use family planning was higher among young women than the older ones. Different contraceptive methods were used for family planning but those didn't suit some of the young women which led to other vaginal or general health issues. Usually, when women working in brick kilns get sick, they go to the dispensers to get medicines. But during pregnancy or to give birth, the majority of the women go to government hospitals where they prefer to consult only female doctors. However, a few women opted to deliver babies at home with the assistance of midwives. All the women tried to have as much diet and nutrition as they could whenever they got pregnant to ensure their maternal, perinatal and newborn health, depending upon their financial situation and family size. The majority of the women seek advice and support from their own mothers or sisters or from their mother-in-law. Usually, when women get sick, they go to have medicines with their husbands but at the time of delivery, they also take a woman member to the hospital for medical assistance or to take care of a new-born baby. Usually, husbands get involved in all kinds of decision-making, either in the house or outside the house. Usually, migrated women deliver their babies in their own hometown instead of their workplace station due to the availability of all relatives in the hometown. None of the women got paid leaves from work by the owners for the delivery of their baby.

Discussion:

The traditional brick-making process use hand-made bricks fired in Fixed Chimney Bull's Trench Kilns, a common method in South Asia. The use of low-quality fuels or coal during baking result in harmful emissions that adversely affect health (Ahmad et al., 2022; Joshi & Dudani, 2008; Skinder et al., 2014c) and the environment. Current study revealed that women working in brick kilns are facing general health issues such as breathing problems, coughing, respiratory problems, kidney issues, tuberculosis, skin allergies, hepatitis, piles, muscles and joint pain due to dust and heat exposures, drinking of contaminating water along with soil deterioration in the environment of brick kilns. However, no safety or precautionary measures have been taken by owners of brick kilns.

The research findings also highlighted all the people working in brick kilns are exposed to health risks but young women and newborns are particularly vulnerable due to hazardous environment. Although pregnant women need healthy and nutritious meals, due to poverty and inflation, it is difficult for them to even eat two simple meals a day. The research findings also

highlighted that a female due to hepatitis cannot feed her new born baby, and buying good formula milk is not something they can afford. So, the health of both mother and infant also get affected. This study exposed that the major source of drinking water was hand pumps or water pump motors which makes them more vulnerable to acquire contaminated water associated diseases. In support of these findings, earlier studies revealed similar widespread issues faced by the brick kilns workers such as inadequate access to clean drinking water, poor lighting, excessive heat and exposure to hazardous substances (Forastieri et al., 1999; Pahawar et al., 2021). Similarly, the pressure to meet production quotas also discouraged families from prioritizing education of their children) and negatively impacted their health (Forastieri et al., 1999; Kara, 2014; Najar et al., 2021).

Similar findings are reported by Pahawar et al. (2021) that the ratio of health problems among females is higher than males in brick kilns. Khan and More (2015) revealed that anemia is the most common issue in female labor force. In the brick kiln sector, females have suffered from many reproductive health problems. Preterm birth, low birth weight and gestational problems are considered extensive public health influences (Stieb et al., 2012). Bagchi et al. (2014) conducted a study in India including two groups of female workers (i.e., brick kilns and agriculture). The study found serum progesterone; blood pressure and progesterone/estrogen ratios were lower in the brick kiln female workers comparatively with their equivalent group. However, follicle-stimulating hormone status and individual estrogen were found to be greater in workers than their relevant clinical values. Ergonomic parameters related to specific workstations and directed postures are associated with their occupation. Likewise, gynecological grievances among females have been observed during the production of bricks (Basu et al., 2008; Sanjel et al., 2016).

Moreover, in consistence with the findings of this study, Silan and Kant (2014) reported that migratory workers particularly face challenges in accessing to healthcare services in host communities due to which they prefer self-medication or turn to quacks further increasing their health risks. Similarly, as Bohne (2018) reported, may times brick kilns are located in isolated and far flung remote areas where basic services of life, including health services, are not available.

Conclusion and Recommendations:

After a very comprehensive study of the phenomenon, it is observed that all the persons working in brick kilns are exposed to health risks due to hazardous working environment, women and newborns are particularly vulnerable. On the basis of study findings, it is strongly recommended that Government of Pakistan needs to efficiently implement the Hazardous Occupation Rules (1963) and the Maternity and Paternity Leave Act (2023) and get bound to Punjab Employees Social Security Institution **(**PESSI) for medical assistance for brick kiln workers.

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