



## **An Exploratory Study of Child Labor in Brick Kilns in Shekhupura District, Punjab, Pakistan**

### **\*Rabia Naseem**

Ph.D Candidate Department of Pol. Sc & Intl. Relations @Istanbul Aydin University, Turkey

Email: [rabianaseem462@yahoo.com](mailto:rabianaseem462@yahoo.com); [rabianaseem@stu.aydin.edu.tr](mailto:rabianaseem@stu.aydin.edu.tr)

[ORCID: 0000-0003-2961-2919](https://orcid.org/0000-0003-2961-2919)

### **Muhammad Bilal**

M. Phil. in Sociology @University of Punjab, Pakistan.

Email: [Bilalrana231@gmail.com](mailto:Bilalrana231@gmail.com)

Received: December 19, 2022; reviews: 2; accepted: January 13, 2023

### **Abstract**

This study examines the living condition of child labor at brick kilns with specific to district Shekhupura for that the qualitative research design was used for it. The study sample was the children and family male members working in brick kilns and stakeholders which were selected through purposive sampling. Fifteen in-depth interviews were conducted with male members of families to explore the experience of families along with two interviews conducted from the stakeholders regarding their interventions and causes of child labor. Non-participant observation was also conducted to observe the conditions of child labor in brick kilns. This study used thematic analysis to analyze data, findings revealed that the causes of child labor include poverty along with indulgence in parent's profession and debt bondage. Additionally, seasonal variations effect on debt and health of workers in the form of illness, pneumonia, hepatitis, heatstroke for example, children got red eyes, pale color, and dropped out from schools due to work more time with their parents at the brick kilns. Participants focused on skills for their children rather than formal schooling, only two participants pointed out that education is also necessary with skills. Participants do not foresee the better opportunities for their children because of high expenses in schooling, the poor structure of schools and a worse environment of addiction to drugs. About half the participants got support from the government and private institutions in the form of cash and adult learning programs. Interventions of stakeholders were to enroll more than six thousand children in schools, train the workers for occupational safety and health (OSH), and registering them at NADRA.

## **Keywords**

Brick Kilns, Child labor, Debt bondage, stakeholders

## **Introduction**

Child labor as a problem is a universal and complex phenomenon. There are at least 218 million children aged 5–17 years who were involved in income-generating activities from 2012 to 2016 globally, 152 million of which were vulnerable to child labor if count about one in ten of all children worldwide. In continents, one in every four children in Africa and one in every 14 children in Asia are employed in child labor, compared to ratios in Europe and Central Asia or America where one in every 25 and one in every 19 children work as child laborers respectively (ILO, 2017).

The number in Pakistan, age group 10-17 years is 12 percent in child labor, or absolute terms about 3.4 million. By sex, differences in child labor are large for this age group - the percentage of boys in child labor exceeds that of girls by 8 percentage points. More than 500,000 children below the age of 12 (age 10-11) years were in employment and an additional 1.6 million (age 12-14) were in regular (non -light) work (Khan & Lyon, 2015).

Child labor practice is not a recent phenomenon. Surplus-seeking entrepreneurs opened the way for children. The problem's designation traced to the dawn of the industrial era where the practice starts to employ young children in factories initially, now which used to identify the employment of minors, particularly indulgence in this work their education hamper or health threaten (Encarta, 2006). The phenomena of child labor developed or become concentrated as the capitalism matured through its various stages of development or still in areas where capitalism is developing. Child labor emerged as an endemic problem like other social problems.

In developing countries, masses sent their children to work due to low level of literacy, poverty, high fertility rate, and labor-intensive technology or backwardness as well as Malthus also highlighted the labor prevalence of child labor in the 18<sup>th</sup> century since children decided to fend for themselves because parents unable to provide them with their basic need (Edmonds E. V., 2008). Children readily available there as cheap labor in the form of child labor. This issue is a developmental subject that is worth investigating. Concerns increased by many people for children which are being exploited and forced into labor while in the age of receiving education.

Pakistan as a developing country has problems with child labor. There is a consensus that work has benefits for children, such as improvement in discipline, responsibility, self-assurance, and independency; children learn how to handle money effectively; and they learn work skills by acquiring worthy models (Committee on the Health and Safety Implications of Child Labor, 1998). Labor or work is more harmful if it occurs at younger ages; interferes with school, recreation,

and rest; involves an erratic work schedule, long hours or frequent nocturnal work which includes hazardous occupations and low wages (UNICEF, 1997).

Child labor is defined in different ways according to one extreme definition, the child spends the whole time without getting an education as well as not considered the recreations or holidays termed, child labor. Another extreme definition, child labor interprets as a full-time job, according to the perception of most people appertain child labor as 'bad' (Grootaert & Kanbur, 1995). Some also define the activities of children which is detrimental to their health and safety as child labor (Edmonds & Pavenik, 2005). Child labor is defined differently in different countries such as Vietnam termed child labor, the participation of children in such work in the market that can be damaging to the children in their future. Pakistan, on the contrary, defines child labor as labor with wages that is labor that pays. According to International Labor Organization, child labor refers to those activities performed by persons less than 18 years of age, that deprives children of their childhood, their potential and their dignity which is harmful to physical and mental development (ILO, 2018).

Most children do not decide to enter in work rather than schooling other social and economic factors related to their primary kin or households push them for work (Grootaert & Patrinos, 1999; Shafiq, 2007). More prevalent is facing extreme poverty and lack of basic resources to access them for extra supportive income child labor is considered as a much-needed source by the families (Castle, de Groot, & Haitzma, 2013). So, children continue to work as a seasonal or full-time laborer to get for instant economic benefits nothing important if the work collided with their school enrolment (Kondylis & Manacorda, 2012). Moreover, generally, economic benefits do not reach to these children for their work because families get paid who put them on work (Basu K. , 1999).

In Pakistan, child labor has been seen in all income-generating sectors like production or manufacturing of goods, transportation, agriculture, informal industries, and services. A very high number of unskilled or domestic jobs like hawking, cleaning, shoe polishing, car servicing done by the self-employed (Khan R. E., 2001).

### **Objective of the study**

The main objective of the study is to examine the child labor in brick kilns but the specific are

1. To observe the conditions of child labor in brick kilns.
2. To explore the experiences of families working in brick kilns.
3. To analyze the causes and consequences of child labor in brick kilns.
4. To examine the interventions of stakeholders regarding the issue of child labor.

### **Causes and effects of child labor**

This section explains the argument, counter-argument and data related to my research topic in terms of literature. For example, Ray and Lancaster (2005)

conducted household-level records for exploring the child work and learning outcomes relationship in different countries which selected due to having a large variety of components. The data was collected under the ILO's (SIMPOC). Schooling duration becomes short and attendance is reduced as an adverse effect on a child's learning due to the working of children. Cambodia and Namibia gave evidence of this effect on a child's ability of reading and writing.

Further, Portugal supported the findings, children's failure rate increased due to work hours. Estimation on sex-disaggregated suggested that the learning experience of girls was worse as compared to boys, but exclusions found. But the suggestion of Sri Lankan results, child's attendance in schools as well as schooling duration does not affect by long hours of working. Children's performance in schools worse rather than others due to low adult education in families or families headed by females, adult education played a strong and positive role in improving child learning. This study mentioned that schools near the workplace, supplying the facilities or infrastructure are measures to better the child's learning.

A household survey was conducted for testing the hypothesis in Peru and Pakistan, this contains two or three variables child labor, poverty, and schooling. The hypothesis was generated by making the interrelationship between them. Pakistani data showed that the involvement of children in schools reduced but increased outside if the family fell into poverty, involvement reduced in girls much higher than boys, But Peruvian data failed to detect any significant association. Results revealed that Peruvian have good schools and their children combine employment and schooling as compared to Pakistan. In Peru, hours of working labor of girls decreased in rising men's wages, while in Pakistan, labor hours of girls' effect positively with increasing wages of women. Pakistani women were educated less than Peru women on average. Both countries concurred the mother's education influence child labor and schooling specifically positive association between them (Ray, 2000; Kamano, Patitad, & Watanabe, 2023).

### **International conventions**

Legislation on the eradication of child labor started in 1802, when the Robert Peel Factory Act passed in Great Britain, the very first piece of factory legislation. Further, three international conventions – the UN Convention on the Rights of the Child (CRC), ILO Convention on the Worst Forms of Child Labor, 1999 (No. 182) and ILO Convention on Minimum Age to Employment, 1973 (No. 138) – provide the main legal standards for child labor and a framework for action against it.

The Convention on the Rights of the Child (CRC) stated in Article 32.1 States Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education or to be harmful to the child's health or physical, mental, spiritual, moral or social development. Article 32.2 (United Nations, 1989).

Convention No. 138 represents the most comprehensive and authoritative

international definition of minimum age for admission to work or employment it calls on the Member States to set: a general minimum age for admission to work or employment of at least 15 years of age (Art. 2.3) (14 years of age in less developed countries), and a higher minimum age of not less than 18 years for employment or work which, by its nature or the circumstances in which it is carried out, is likely to jeopardize the health, safety or morals of young persons, i.e., hazardous work (Art. 3.1) (ILO, 1973).

Convention No. 182 represents the worst form of child labor which comprised into four categories: The first worst form of child labor according to ILO is all form of slavery or practices like slavery such as sale and trafficking of children, forced or compulsory labor, including forced or compulsory recruitment of children for use in armed conflict, debt bondage, and serfdom and any similar practices. Children have psychological and physical effects who are engaged in such activities. The second worst form is when children are engaged or persuaded into immoral activities such as prostitution, for the production of pornography or pornographic performance. The third worst form is the situation where children are persuaded or engaged in illicit activities, in the production and trafficking of drugs. Finally, the work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety, or morals of children (Art. 3) (ILO, 1999).

### **Domestic legislations**

The constitution of the Islamic Republic of Pakistan has provision to protect the children, Article 11(3): No child below the age of 14 years shall be engaged in any factory or mine or any other hazardous employment. Article 37(e): The state shall make provision for securing just and humane conditions of work, ensuring that women and children are not employed in vocations unsuited to their age or sex, and for maternity benefits for women in employment. Article 3: the state shall ensure the elimination of all forms of exploitation and the gradual fulfillment of fundamental principle, from each according to his ability and each according to his work. Article 25(A): The state shall provide free and compulsory education to all children of the age of five to sixteen years in such manner as determined by law (Constitution of the Islamic Republic of Pakistan, 1973).

According to The Employment of Children Act 1991, Section 3 and Schedule prohibiting the employment of children (under 14 years of age according to section 2(iii)) in certain occupations and processes. Newly enacted legislation in provinces of Pakistan defined the minimum age for starting work is 14 years (Employment of Children Act, 1991).

The government of Punjab also meet the international standards by having legislation; Section 3(I) (II) An occupier shall not employ or permit a child to work in the establishment and shall not employ or permit an adolescent to perform any hazardous work in the establishment, 11(3) (3b) (3c) of the Punjab Restriction on

Employment of Children Ordinance demonstrate the worst form of child labor under the convention no. 182; Section 5 of the Punjab Prohibition of Child Labor at Brick Kilns Act prohibiting the occupier to employ, engage or permit a child to work at the brick kiln (Government of Punjab Province, 2016)

Apart from legislation in Pakistan, the National Policy and Plan of Action to Combat Child Labor in Pakistan started (Munir & Mangi, 2007), which included the enforcing labor laws and the abolition of child labor, universal education and expand the social-safety as long-term objectives, raising awareness, situational analysis and disengaging children from worst conditions as short-term objectives and strengthening the institutions, increased checking services and supplying to children with education and training as mid-term objectives.

International Labor Organization (ILO) with the collaboration of the Government of Punjab started many social programs to address child labor such as the Bait-ul-Mal Program, Elimination of Child Labor, and Bonded Labor Project (Integrated Project for Promotion of “Decent Work for Vulnerable Workers” in Punjab Province) and ILO funded projects like \$216,000 project Sustaining GSP Plus Status by Strengthened National Capacities to Improve International Labor Standards (ILS) Compliance and Reporting (2015–2018), and the \$465,000 project Elimination of Child Labor and Promotion of Decent Work in the Stora Enso Value Chain in Pakistan (2015–2018) (ILO-IPEC Geneva Official, 2018).

### **Brick kiln sector**

In Pakistan like other countries China, India, Nepal, the fast-growing industry is brick manufacturing which is considered as the oldest industry. Brick manufacturing techniques and skills are like the Indus Valley Civilization used at that time. It is believed that tombs and places of worship were constructed by using bricks made in kilns, in Egypt and Mesopotamia civilizations. The manufacturing technique of bricks almost remained the same, but the shape and form of bricks distinctively changed from an olden day. Brick kilns are located adjacent to the rural areas where the production of bricks takes place as a process.

Pakistan is in third place as a major producer of bricks in south Asia, there are around 20,000 brick kilns with a production of 45 billion bricks, which add up to 1.5% of the Gross Domestic Product (GDP) of Pakistan (CCAC, 2018; Saeed, 2017). Despite this, it also contributed to environmental and social problems in the form of air pollution and the worst form of child labor which may indemnify its benefits due to its hazardous nature. Around the world, 73 million children were involved in hazardous conditions with long working hours. Poor and developing countries contain more incidence of child labor (Ali, Ali, & Abbas, 2017), as 1.3 million children age 15-17 years were employed in hazardous work in Pakistan (Khan & Lyon, 2015).

Pakistan, Nepal, and Bangladesh in Asia showed concerns about the impact of the emission of black smoke from brick kilns (Clean Air Initiative Asia (CAI-Asia),

2008). The majority of brick kilns in Pakistan were consumed (coal, wood, natural gas, or cow dung cakes) as fuel for firing bricks without a scientific way (Ishaq, Murad, Akbar, & Ahmad, 2010). Emissions smoke from brick kiln contained air pollutants, heavy metals, fume pollutants, and unstable organic compounds. Combustion of rubber tires as fuel emitted carcinogenic dioxin (Joshi & Dudani, 2008). It has been previously estimated a 70 % risk increased of chronic obstructive pulmonary disease (COPD) due to the contact of wood smoke (Sood, et al., 2009).

Environmental regulation on poor air quality or air pollution made short term actions to keep the environment clean and smog-free. The EPD Punjab has planned for adopting zig-zag technology after the success in Nepal and collaborate with the brick kiln owners to accelerate efforts for it.

The committee argued for closing brick kilns due to the worse condition of smog and willing to sacrifice during two months of a sensitive period last year. The association of brick kiln agreed for shutting down the brick kilns in October for two months when the smog occurs after the joint coordination with EPD. The new brick kiln will only be allowed for construction if it follows the new Zig-Zag technology (Environment Protection Department, 2018; Tribune, 2018).

### **Effects of brick kilns**

Several scholars from all over the world produced studies on the effects of high temperature in industries which provide evidence that heat stress brought worsening the routines, proficiency, manufacturing, and work's quality (Grandjean, 1980; Sen, 1965). Everyone from every age group is at risk due to contact with extreme heat (Jendritsky & Tinz, 2009).

Moumita and Subhashis (2014) examined the relationship of heat contact and effects on the health of female brickfield workers in India. The study used to evaluate the environmental temperature, weekly work productivity analysis, cardiac strain, and walking speed in the brickfields for 8 months. Brickfield workers divided into brick molders, who made bricks and leaving to dry infield, and brick carriers who carrying the sun-dried bricks into the brick kilns and scorch bricks into carts. The result demonstrated that the environmental temperature was raised in summer due to supplementary heat stress burning from the brick kilns. As the air temperature raised productivity declined weekly. The parameters of cardiac increased on hot days than on cooler days for molder workers, both affected in hot days. Carriers workers adapt the techniques and working hours on hot days, they reduced the speed of walking to avoid heat stress their productivity also decreased as well as also lose some part of their wages. Results announced that about two percent of productivity lost in brickfields while rising every degree in temperature.

In a related study in Thailand, Langkulsen et al (2010) suggested the results that worker's productivity depends on the level of contact with heat, while productivity is reduced in construction and pottery industries from ten to sixty percent due to heat exposure. However, health is also affected due to climatic

conditions in work-related areas. Besides, workers experienced mental suffering due to exhaustion of heat. As well as females also faced heat stress while working in the brickfield both from the sun at the outside and exhaustion of heat in process of consuming fuel inside the brick kilns (Sahu, Sett, & Gangopadhyay, 2010).

Kjellstorm, Holmer, and Lemke (2009) described the effects of heat and productivity as a physiologic process, which showed that most of the cases of hyperthermia were not reported due to high temperature, however, increased cases were cardiovascular and respiratory hospitalizations and deaths (Basu & Samet, 2002). Due to the shortage of water in the body or body warmth not only brought the heat distress but more chronic or long term effects detected in the form of heart stroke or kidney failures (Bridger, 2003).

Brick kiln mostly remained not discovered internationally due to the premise towards children that they worked with their families to increase the household income so it may be a family work. So, because of family work, many transnational institutions were not closely involved in informed child labor which indulged in informal sectors (Edmonds, 2008). In Pakistan, for a detailed picture of the hazardous environment at brick kilns, global authorized produced very less content for exact numbers through funded projects (ILO, 2011; ILO, 2013; Khair, 2005; Khan & Lyon, 2015).

Procreative system disturbed badly by the contact with heavy metals or particulate reminded through several scholarly contents (Benoff, Jacob, & Hurley, 2000; Telisman, et al., 2000), either by the issue of nervous or hormonal, or genital gland system or by directly disturbing the male reproductive cell, resultant in damage the sperm quality (Wyrobek, et al., 1997).

Further evidence on health effects found from the study conducted in Pakistan, which planned to measure the consequences of contact with exhaustion towards reproductive health on workers of the brick kilns, and others resided nearby it. This study found that Body Mass Index (BMI) and Mean Cell Hemoglobin (MCH) were significantly reduced of people who resident nearly twenty years in the area of production of bricks, and whose contact time was ten to twelve hours in a day. Without equipment of protective kit e.g., handwear, face cover, oxygen mask, eye wears, and coveralls. results showed very high contact with contaminated particles discharged from brick kilns like heavy metals. This high concentration of heavy metals caused a significant increase in plasma luteinizing hormone (LH) and both caused reduced testosterone concentration in brick workers. The results illustrated that about forty percent of respondents worked as brick bakers they were not having a single child since their wedding, about more than fifteen years ago. Due to contact with oxidative catalyst brick workers caused with oxidative strain, in consequences, it damaged the DNA, modification of proteins, and many others, which brought disease as an agent such as cancer, atherosclerosis, cardiovascular diseases, neurological disorders, and chronic infections (Durackova, 2010; Jahan, Falah, Ullah, & Rauf, 2016).

Khisroon et al (2018) evaluated the damaging of DNA in workers of brick

kilns and inhabitant residing near it by applying the technique of comet assay (CA) in Pakistan. While consuming various types of undone resources as fuel for a scorching brick at brick kilns which wielded the negative consequences on both brick workers and nearby habitants. As the length of hazard contact increased statistics showed that the chances increase of more damaging the DNA. Using tobacco also had consequences on the experiment group rather than the control group on the total comet score (TCS).

Khan et al (2019) assessed the effects on the health of humans due to air pollution of both brick kilns and sugar mills. Household data collected from affected the surrounding areas of both industries and in that area where these industries were not functional. Data collected in seasonal functional months throughout the year which was divided as a non-crushing period when just one industry as the brick kilns was functional (May-October) and a crushing period when both industries sugar mills, as well as brick kilns, were functional (November-April), from affected and controlled areas. Some variations found in areas of affected and controlled like asthma respondents had a higher rate in affected rather than controlled areas. In the duration of crushing a variety of indicators found of cough, COPD, and hypertension. With proper inspection wax found in the ears of children but not any irregularity in hearing found as well as BMI value recorded normally. This study suggested that air pollution was the product of these industries both brick kilns and sugar mills. Another study has revealed another evidence in the relationship between asthma and pollutants in the air. In the age group of fifteen to sixty years about seventy-seven percent found in areas of affected where just the brick kilns functional or non-crushing duration (Ribeiro, 2008).

To explore the consequences of child labor on the lives of children from various dimensions indicated in a very less scholarly article. In defining the aspects of education on them, Beegle, Dehejia, and Krutikova suggested a high risk of deprivation of sleeping if the children do their work as well as also perform in schools. While proper identification more consequences of deprivation in sleeping found if the indulgence in work increased to twenty hours in a week and attendance reduced while not daily visiting schools. Therefore, consequences or effects on education indicated due to the working of children as child labor, children who worked got less schooling about two years rather than from who did not work but just study (Ravallion & Woodon, 2000).

Similarly, Bunnak explored the relationship between participation of children as seasonal labor and learning consequences. Findings suggested that the more time they worked in seasonal work the increased the consequences of schooling found in the form of getting low grades, absent from classes, or sometimes dropout from schools. Many other scholarly contents proved that education and income of parents affected the children for more engaging in working as child labor rather than those parents who afforded the expenditures of their children's education (Ersado, 2004).

While studying the problem of brickfield habitans about every interviewee suggested that habitats nearby brick kilns affect the health issue of children as well as elders. The worst consequences of health issues in the form of mortality in adults after long-term contact with the pollutions of substance in brick kilns (Pope, et al., 2002), also evidence showed the less contact consequences in the form of a toddler and newborn child mortality and overall group of different ages experience the illness (Abbey, et al., 1995; Ostro, 1994).

Further evidence on the consequences of the brick kiln industries, which conducted in Dhaka, Bangladesh. Local people were selected for interviews and FGDs. Respondents revealed that brick kilns built on fallow land, suburban areas, and forest lands. Despite the new technologies (zigzag, Hybrid Hoffmann), the archaic method is used everywhere, with a few exceptions. Brick kilns consumed firewood, coal, and natural gas as well as clay. Farmers and brick kilns competed for the same type of clay. Respondents indicated that the emission from brick kilns can cause a reduction in environmental quality and harm human health. Experience water shortage in paddy harvest season due to more water processing, toxic waste polluted the canals or ponds, damaging topsoil fertility, leaf burn of fruit plant or vegetables, and delayed growth of crops. Consequently, farmers suffered huge economic losses (Saha & Hosain, 2016).

To assess the emissions of brick kilns and the effects on the quality of air for suitable managing for its measure, AIRPET-Vietnam conducted this study in the Asian Regional Air Pollution Research Project (AIRPET), collaborated through the Asian Institute of Technology. High air pollution levels observed in the production of bricks under the normal production conditions, mostly SO<sub>2</sub> and PM particles found. Due to the consumption of coal in kilns, kilns were banned during crop season to protect the major rice crops. The result suggested that for reducing the emitting of carbon dioxide gases preferred the consumption of fuel which contains very less content of Sulphur, this can be implemented forcefully as a measure. As well as, controlling the quality should use devices for control which is termed as 'command and control' and further adopted the cleaner measure in production through awareness and giving incentives for brick owners which are used as 'market-based instruments'. For advancing technology used the emitted fees applying to the brick kilns which induced cleaner manufacturing, which suggested that for a better quality of air it is considered as repulsion energy toward managing the betterment of air (Co, et al., 2009).

Zakar et al (2015) examined the health hazards faced by child labor at brick kilns. This study used both quantitative and qualitative data collection methods, about fifty-five households selected in the district of Okara, Pakistan. Using a survey, focus group discussions, and observation data gathered from parents and child laborers. Results highlighted, long working hours sometimes twelve hours a day leaves no benefit for the children despite getting injured, bruises, and lethal diseases such as hepatitis, asthma, tuberculosis, and anemia.

Children worked at risk without any protective clothing, gloves, and safety shoes. Parents highlighted poor conditions in government schools, violent behavior of teachers, poverty, and the high rate of unemployment which hindered children's education, but children wanted to learn skills.

### **Research Methodology**

Through purposive sampling adult male workers from families working in brick kilns were selected for in-depth interviews whose children were also working there. Participants' demographic characteristics are described in the analysis section. For the sake of primary data, the researcher used in-depth interviews and non-participant observation as a data collection method. Fifteen interviews were conducted with male workers and two interviews from stakeholders conducted through face-to-face interaction in a natural setting. In the first step, participants were recalled of the purpose, the procedure of the study, their right to participate or withdraw at any time from the study, and the confidentiality of protection. For developing a good rapport with workers researchers elaborate on the topic to them. For the interview guide for participants see Annexure A and for the guide for stakeholders see Annexure B.

### **Data Analysis**

The prime purpose of this study was to understand the living condition of child labor in brick kilns and explore the experience of male members of families regarding their work and their children's work in detail. The other purpose to know the causes of child labor through documenting the interventions of stakeholders regarding this problem.

### **Socio-demographic information of participants**

The results of this qualitative study were based on interviews of fifteen male workers from brick kilns of district Sheikhpura. All participants added to this study with their consent to participating. Two stakeholders, one from the private organization or NGOs, and the other one were from the department of the government of Punjab, both involved in the program to eradicate child labor and bonded labor, to promote decent work for vulnerable workers in this region.

Each participant provided basic information such as their age, education, work hours, work type, family type, family monthly income, number of children working at brick kilns, number of family members as socio-demographic information of male workers working at brick kilns.

Table.1: Socio-demographic information of participants

Participants	Age	Education	Work hours in a day	Work type	Family member	No. of children at brick kilns	Monthly family income
1	32	3 <sup>rd</sup> class	8-10	Pathera	8	3	40,000
2	42	Middle	8-10	Pathera	9	5	52,000
3	39	Illiterate	6-8	Jalaiwala	6	3	38,000
4	43	Illiterate	8-10	Pathera	11	5	44,000
5	40	Illiterate	8-10	Pathera	12	7	55,000
6	37	Illiterate	6-8	Jalaiwala	7	4	47,000
7	40	Middle	8-10	Pathera	7	3	39,000
8	42	Illiterate	8-10	Pathera	8	4	44,000
9	50	Illiterate	8-10	Bharaiwala	7	3	48,000
10	47	Illiterate	8-10	Pathera	9	5	55,000
11	45	Primary	8-10	Pathera	7	2	36,000
12	38	Illiterate	6-8	Jalaiwala	10	4	50,000
13	41	Illiterate	8-10	Pathera	6	2	37,000
14	49	Illiterate	8-10	Pathera	7	3	42,000
15	44	Illiterate	8-10	Pathera	8	2	45,000

Participants of this study work as *patheras* (who made bricks from mud) and their children work too with the same skill, however, the children of the other work type of participants such as *jalaiwalas* (who bake the bricks in brick kilns) also work as *patheras*. The work hours of participants above mentioned in table no 4.1 written on the hours they spent for work in a day at the time of interviews, otherwise, work hours increased to twelve hours in a day this varies with seasonal variations. All participants did not know their monthly income due to the wage structure in the brick kilns because every worker gets the pay weekly of their weekly work which increases or decreases with many factors, so the above written in the table is infer from their last week pay before cutting for their debts as well as above indicated the whole family's income. All participants lived in a nuclear family structure because most workers were migrants from different rural regions and lived in quarters of brick kilns of Sheikhpura. However, they took with them only those members who help in working in brick kilns to regulate their expenses and mostly old members were died or lived in homes.

### Analysis of participants' responses

Six distinct themes were generated from the research data. The major themes identified from the results of this study included

Table. 2: Emergent themes

Main themes	Description
Poverty and parents' profession	work of parents and a very low income of household is a push factor for children to work in brick kilns.
Peshgi and wage structure	getting advance by parents increases the prevalence of child labor.
Seasonal and health impact	bethiki and temperature variation affect the health condition of children as well as the economic conditions of parents.
Less future opportunities	with low schooling, children do not get high professions.
Socio-economic insecurities	parents take their families to work in brick kilns to avoid children from bad habits and addiction to drugs.
Accommodation from institutions	Punjab government compensate to increase the attendance rate.

### Poverty and parents' profession

The low income of the household is a big cause of the working of children in brick kilns. All participant pointed out that poverty is a push factor which pushed the children towards brick kilns. Participant 6 who work as *pathera* for about twenty-eight years in brick kilns said, "when I was a child, I started work to fulfill the basic needs of my siblings as an elder". Participant 9 who worked as *bharaiwala* (who fills the kiln with coal) for forty years reported, "we lived in rent house my parents worked throughout the day in brick kilns but their pay is ineffective for all expenses so in my childhood I started work for a living".

Participants 11 or 15, who were *patheras* in brick kilns explaining the dusty work was a result of poverty as a child you did not get things as other children get in your surroundings, think what will you do? despite the only way of work to get everything so that's why we and our children were there. Participants 13 explicated by indicating himself:

I as a father, alone I am unable to provide the food twice a day, well clothes and other necessary needs of every family member so my wife and two children worked with me in brick kiln to assist me to access all but these are still unachievable for us.

Participants 14, who worked in brick kilns for thirty-eight years and still working with his three children narrated:

I feel ashamed while seeing my children work in dangerous sites and still they did not eat good food what helplessness of me. Poverty pushed us to live in marginalized locations. My family lived in a quarter of brick kiln with two rooms, no

washroom and kitchen, single tap which we used both for [bath] shower and [bartan] cookware. Being poor life is nothing.

Participants relating the parent's profession with poverty for working in brick kilns by saying 'their parents work in it, so they were'. After further probes, participant 3 pointed his child which is about eight to ten years and said "I was at his age when my father took me with other family members for work if father's income covered all expenses then why I started work here with them" participant 5, "it was so long since I was in my conscious I worked with my parents and now my children worked with me". Participant 12, "I was an elder, so my parents took me to assist in work after that I indulge in it".

Participant 7 explained parents profession affected more on children profession in brick kilns, they were chosen or not this work effect more rather than poverty, with sharing the experience: "here mostly children got the skill while working with their parents without knowing the consequences of their work when they get its effects they were not in a position to change profession by learning a new skill." When the researcher asked them about why the changing profession is difficult, participants talked about *peshgi* and advance debt which hinders their mobility. The next section reviews the snippets of interviews related to debt bondage and their wages.

### **Peshgi and wage structure**

Of fifteen participants twelve participants reported that *peshgi* or debt bondage bounded the worker to the next year for work in one brick kiln, to get off from debt workers need to work more or took their family members for work. This debt increased the participation of children in brick kilns. Participant 1 noted, "I took the one lac debt in advance for marrying my daughter, my whole family work to get rid of it." Participant 10, who was getting one and a half lac debt this year, reported, "I took debt for my wife's delivering and other expenses."

Participants reported that the debt bondage is not a principle for working in brick kilns, but every worker of every work type took it before starting to work. They said that taking debt is like a [sood] usury which paid from the generations of workers. When the researcher probed further how much time you required to clear the debt. Participant 2 demonstrated, "I am not getting debt this year because I have already dragged three lacs of debt from last ten years and may be required for me next ten years to cleared it out." Participant 13 reported, "I was an elder in my siblings so after the death of my father the whole debt transferred to children which we divided to brothers." Participants indicated that the debt cut from the weekly salary of all workers, a slight difference found in cutting from salary with the spatial location of brick kilns; twenty-five percent of cutting which is near the urban and forty percent cutting which is near the rural. As well as the salary of *patheras* in brick kilns nearer the urban was thirteen hundred rupees against one thousand bricks but in brick kilns nearer the rural gave *patheras* from one thousand

to eleven hundred rupees for it. Participant 6, who working as *pathera* in a brick kiln along with four children three daughters and one son, responded:

I just made three to five hundred bricks with my full potential in a day after cutting of twenty-five percent for debt than in a day how much I get and how much I paid to it. Therefore, I took my wife and four children for making bricks together we made more than a thousand bricks in a day after cutting we get enough money weekly for expenses as well as shortened the debt too. We aware of not go beyond our capacity.

Participants pointed out that all the work type of brick kilns was very hard, but the wage was very low. They demonstrated the work before mixing water and soil, the ground must be cleared and leveled which takes our four to five days with zero benefits. After mixing soil and water but sometimes mixed salt in it due to bad soil than from this mixture we made bricks which gave us money. Participant 4 reported, "my younger son about twelve years old and he worked as an adult. He assists me in every work of what *pathera* do to made bricks."

Three participants who have pointed the working of children in brick kilns not due to bondage of their parents but due to the freedom of work. Participant 11 justified the freedom of work by saying, "we stop working when we tired from work no matter how many bricks were, we made." Participant 7, who under the debt of about four lacs, narrated:

we used the debt to resolve our big problems, I took debt for buying the plot which I build it further in the coming years. I never found a profession for illiterates which give them lacs, poor people made for works so we were doing no matter what type of it so why not in brick kilns. Despite this, we paid in advance for that work which gave us the freedom to do it.

Participant 8 reported, "advance debt is like an addiction which pushes workers and then pushes their children to work in brick kilns." When the researcher asked them about the effects of the work which they do in brick kilns, participants pointed out the seasonal effects of their work hours as well as their health. The next section gives detail of their views.

### **Social and economic insecurities**

This section highlighted the further reasons for workers to take the children and female members for work in brick kilns. Three participants highlighted that addiction to drugs was prevalent in brick workers. Participants 15 talked about the risky environment of society toward their children because of addiction to drugs by saying, "I always remained in fear for my son to not indulge in drugs, where I lived in quarters, mostly male members took [chars] hashish." Other participants 3 justified by stating, "children remained out of sight in school from us, so might be they get to indulge in drugs. But while working, they do not get time for free-roaming, after work they mostly spent time sleeping due to tiredness." Participant 8, narrating his experience:

I got addicted to drugs, my family faced critical days of starving for about two years, debt increased. I hardly worked for my living, when my wife and elder son keep house, their day and night work increased the income, to disentangle my addiction they migrated from one brick kilns to another, they managed the expense of all family member. Thank God, I have a caring family.

The participant said the addiction affect the debt and bonded the adductor's family permanent in brick kilns. Owners gave less debt to his family because of not paid through work from the adductor. Participant 5 reported:

an adductor died due to addiction when I came here after migration, the owner bound his family, his son bitten by owner's men due to not producing demanded bricks and his wife and daughter worked in the owner's house. I did not know how much they paid for their work.

While interview participants specifically talked in an undertone for saying that our society has many evils, mostly migrant children got sexually assaulted by locals, we cannot fight alone who know us. Participant 8 reported, "I did not agree to send females for domestic work as a maid, I heard some events of maids for getting abused or assaulted which frustrated me but fortunately I took a good decision for them." Other participant said, "I took my family to the brick kiln, I know the consequences were bad, but this place saves from being assaulted."

Five participants of the fifteen talked sending females for domestic work bring us benefits, it just rumored of assaulted and abused. Participant 14 reported, "my wife got used clothes from the [malikan] mistress of Chaudry and getting food one time in a day which lessened our expenses." Participant 7 narrated:

my wife preferred to work as a maid within the walls rather than the site between males, she earned well in working two or more houses with used clothes. She sent me food at the noon, if she worked with us on the site then who gave me a meal, I am glad for her wise decision.

## **Discussion**

This study suggested that child labor in the brick kilns was due to the indulgence of their parents in it and specifically the profession of parents which moved intergenerationally as one participant responded by giving views on how long he has been working in brick kilns, "it was so long since I was in my conscious I worked with my parents and now my children worked with me." There lies a connection between this findings theme with the result which Hilson (2012) pointed that child labor is engrained culturally or become a cultural norm for families which influenced them to make decisions to put them in dangerous workplaces. Results of this study support the luxury axiom of Basu and Van poverty is considered as the major cause of child labor and also many studies agree with this axiom (Basu, Das, & Dutta, 2010; Hilson, 2012; Khan R. E., 2001).

Stakeholders determined poverty as a tool of getting stipend and sympathy for workers because with poverty other contributing factors involved as causes of child labor in district Sheikhpura. The most important factor is their nomadic

lifestyles due to their mobility in different regions of brick kiln along with their families. As Sharma and Dangal (2019) studied the seasonal child labor in Nepal, seasonal means they migrated in brick-making season towards brick kilns from rural areas, due to migration their children have less ability to perform in schools, bad final grades and producing high dropout rates. They also highlighted that child labor is their necessity rather than a choice. The number of children, debt bondage, and very little priority towards education also causes child labor at brick kilns according to the stakeholders. Children's mental deterioration is consequently considered due to working at a brick kiln. Brick kiln effect both long term diseases such as asthma, cardiovascular, and short-term heat stroke, injuries, bruises effect on children as well as on children. Due to not safety measures many cuts and burn got by the workers at brick kilns (Zakar, et al., 2015).

Stakeholders highlighted their interventions for mitigating child labor in brick kilns which consist of enrolling the more than six thousand children into schools working at brick kiln along with their families or parents. The nonformal schools were made at zones where the prevalence of child labor is known through mapping and clustering. One school contains both male and female total number is thirty-five. An initiative was taken by the stakeholders for combining the two or three schools in those areas where a cluster of brick kiln found so they decided to make a cluster of schools with management committees for administrative purposes. Workers get the training of OSH (Occupational safety and health) and equipment for working at brick kilns. This project also made the national identity card and certificates (B-form) for registering in the National Database and Registering Authority (NADRA). The project ended after the changes in bureaucracy so the administrator came with new plans so the partner changed and schools gave hold to the PEF for operation but the shortage of funds is worse of flaws recruited teacher did not get their stipend for about six months and after one and half year projects phase-out.

Give subsidy to the brick owners to upgrade the brick kilns to avoid the pollution as well machinery take on rather than workers. Due to having a cluster of brick kiln in Sheikhpura district so schools made near the brick kiln when the workers come for work, their children enroll in these schools. Curriculum attracts the children so schools with skill-based learning despite formal learning because for them formal learning has no charm due to the unemployment issue of our country.

### **Conclusion**

This study aimed to explore child labor at brick kilns in the district of Sheikhpura. This ascertained and record the experiences of male workers of families for their working at the brick kiln and the responses of the stakeholder's intervention towards the issues of child labor. Fifteen participants selected from brick kilns as male workers of families and two stakeholders selected who done the intervention on the issue of child labor in the respective regions. In-depth

interviews technique helps for getting results which showed that the causes of child labor are poverty with other contributing factor parents' profession and debt bondage.

Families lived in quarters of the brick kiln which were located in the marginalized area due to this they were getting very low facilities. Children led his or her lives at brick kiln while remaining with their parents and they moved from one brick kiln to another which they made very easy by giving *peshgi* from one owner by taking to another owner. While observations children were half-naked, playing, and assisting their families in making bricks and mostly remained in the field with their parents.

Females were also doing the domestic work on some other houses as a maid which their male workers preferred for this work rather than work at brick kiln because of getting benefits in the form of cash, used clothes and meal but some of them did not want to send their females for domestic work because of fear of assaulted and abused. Stakeholders confirmed that poverty is not just a myth as a caused of child labor despite these other contributing factors such as nomadic life of families from one brick kiln to another, debt bondage of families, not children and most children not working with their parent they were with them in the field because of playing and assisting. Their intervention against child labor is to enroll the more than six thousand children into the nonformal schools. Due to change in bureaucracy, their stakeholders changed and new come with diverse minds on different perspectives to fulfill this project, so the interventions were not fulfilled after one and half-year, and at the end project ended. The worst flaws of the project are not to finance the teachers which they recruited for non-formal schools, changed the contributing organizations in between the processing.

### **Recommendations**

Future recommendations are forwarded to mitigating the child labor from the brick kiln industry

1. Increase the awareness of the importance of education in brick workers.
2. Provide benefits for studying in government schools for brick workers' children.
3. Law enforcement agencies coercively acted for freeing the children from brick kilns.
4. Increase the wages of brick workers and restrict the *peshgi* structure in brick kilns.
5. Labor laws adapt to implementing at the local level.

### **Acknowledgement**

We acknowledge the originality of the data, and the authors would like to thank the reviewers.

### **Declaration of conflicting interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/ or publication of this article.

### **Funding**

No particular grant from a funding agency in the public, commercial, or nonprofit sectors was given to this research.

### **References**

- Abbey, D. E., Lebowitz, M. D., Mills, P. K., Peterson, F. F., Beeson, W. L., & Burchette, R. J. (1995). Long-term ambient concentrations of particulates and oxidants and development of chronic disease in a cohort of nonsmoking California residents. *Inhalation Toxicology*, 7(1), 19-34. doi:10.3109/08958379509014268
- Ali, M. A., Ali, M. V., & Abbas, F. (2017). Hidden hazardous child labor as a complex human rights phenomenon: A case study of child labor in Pakistan's brick-making industry. (J. M. Chamberlain, Ed.) *Cogent Social Sciences*, 3(1). doi:10.1080/23311886.2017.1369486
- Basu, K. (1999). Child labor: Cause, consequence, and cure, with remarks on International Labor Standards. *Journal of Economic Literature*, 37(3), 1083-1119. doi:10.1257/jel.37.3.1083
- Basu, K., Das, S., & Dutta, B. (2010). Child labor and household wealth: Theory and empirical evidence of an inverted-U. *Journal of Development Economics*, 91(1), 8-14.
- Basu, R., & Samet, J. (2002). Relation between elevated ambient temperature and mortality: A review of the epidemiologic evidence. *Journal Epidemiol Review*, 24(2), 190-202. doi:10.1093/epirev/mxf007
- Benoff, S., Jacob, A., & Hurley, I. (2000). Male infertility and environmental exposure to lead and cadmium. *Human Reproduction Update*, 6(2), 107-121. doi:10.1093/humupd/6.2.107
- Bridger, R. (2003). *Introduction to ergonomics* (2nd ed.). London: Talyor and Francis.
- Castle, E., de Groot, A., & Haitsma, M. (2013). *Poverty and child labor in Kathmandu*. Kathmandu: Mandala Book Point.
- CCAC. (2018). *Climate and clean air coalition*. Retrieved from <http://www.ccacoalition.org/en/news/pakistan-moves-toward-environmentally-friendly-andcost-effective-brick-kilns>
- Clean Air Initiative Asia (CAI-Asia). (2008). *Clean brick making technology*. Retrieved from <http://www.cleanairnet.org/caiasia/1412/article-70695.html>
- Co, H. X., Dung, N. T., Le, H. A., An, D. D., Chinh, K. V., & Oanh, N. T. (2009). Integrated management strategies for brick kiln emission reduction in vietnam: A case study. *International Journal of Environmental Studies*, 66(1), 113-124. doi:10.1080/00207230902760507

- Committee on the Health and Safety Implications of Child Labor. (1998). Protecting youth at work: Health, safety, and development of working children and adolescents in the US. Washington DC: National Academy Press.
- Constitution of the Islamic Republic of Pakistan. (1973, April 10). Refworld. Retrieved from <https://www.refworld.org/docid/47558c422.html>
- Durackova, Z. (2010). Some current insights into oxidative stress. *Physiol Res*, 59(4), 459-469.
- Edmonds, E. V. (2008). Child labor. (T. P. Shultz, & J. Strauss, Eds.) Amsterdam: Elsevier.
- Edmonds, E. V., & Pavenik, N. (2005). Child Labor in the global economy. *The Journal of Economic Perspectives*, 19(1), 199-220.
- Employment of Children Act. (1991). Natlex. Retrieved from <https://www.ilo.org/dyn/natlex/docs/WEBTEXT/22707/64834/E91PAK01.htm>
- Encarta. (2006). Child labor. Digital Multimedia Encyclopedia Microsoft Corporation.
- Environment Protection Department. (2018, September). Smog commission report. Retrieved from [https://epd.punjab.gov.pk/smog\\_commission\\_reports](https://epd.punjab.gov.pk/smog_commission_reports)
- Ersado, L. (2004). Child labor and schooling decision in urban and rural areas: Comparative evidence from Nepal, Peru and Zimbabwe. *World Development*, 3(33), 455-480.
- Government of Punjab Province, Pakistan. (2016, January 14). The Punjab Prohibition of Child Labor at Brick Kilns Ordinance. Retrieved from <http://www.ilo.org/dyn/natlex/docs/ELECTRONIC/102087/123287/F1018921745/PAK102087.pdf>
- Grootaert, C., & Kanbur, R. (1995). Child labor: An economic perspective. *International Labor Review*, 134(2), 187-203.
- Grootaert, C., & Patrinos, H. A. (1999). The policy analysis of child labor: A comparative study. Palgrave Macmillan.
- Hilson, G. (2012). Family hardship and cultural values: Child labor in Malian small-scale gold mining communities. *World Development*, 40(8), 1663-1674. doi:10.1016/j.worlddev.2012.03.017
- ILO. (1973, June 26). Minimum Age Convention (138). Retrieved from Normlex: [https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P1\\_2100\\_INSTRUMENT\\_ID:312283](https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P1_2100_INSTRUMENT_ID:312283)
- ILO. (1999, June 17). Worst Forms of Child Labor Convention (182). Retrieved from Normlex: [https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P1\\_2100\\_ILO\\_CODE:C182](https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P1_2100_ILO_CODE:C182)
- ILO. (2011). Buried in bricks: A rapid assessment of bonded labor in bricks kiln in Afghanistan. Geneva: ILO.
- ILO. (2013). Toil in soil: Impact of work and brick kilns on health of children and youth. Geneva: ILO-EC.
- ILO. (2017). Global estimates of child labor: Results and trends, 2012-2016. Geneva: International Labor Organization.

- ILO. (2018). What is child labor. Retrieved from <http://www.ilo.org/ipecc/facts/lang-en/index.htm>
- ILO-IPEC Geneva Official. (2018, February 10). Email communication to USDOL official.
- Ishaq, M., Murad, A. K., Akbar, J. F., & Ahmad, I. (2010). Heavy metals in brick kiln located area using atomic absorption spectrophotometer: A case study from the city of Peshawar, Pakistan. *Environ Monit Assess*, 166, 409-420.
- Jahan, S., Falah, S., Ulah, H., Ullah, A., & Rauf, N. (2016). Antioxidant enzymes status and reproductive health of adult male workers exposed to brick kiln pollutants in Pakistan. *Environment Sci Pollut Res*, 23(13), 12932-12940. doi:10.1007/s11356-016-6454-2
- Jendritsky, G., & Tinz, B. (2009). The thermal environment of the human being on the global scale. *Global Health Action*, 2(1). doi:10.3402/gha.v2i0.2005
- Joshi, S. K., & Dudani, I. (2008). Environmental health effects of brick kilns in Kathmandu valley. *J Med*, 6(1), 3-11.
- Kamano, K., Patitad, P., & Watanabe, W. C. (2023). A dynamic allocation model for bike sharing system; the sharing economy concept. *Engineering and Applied Science Research*, 50(1), 74-81. <https://ph01.tci-thaijo.org/index.php/easr/article/view/251125>
- Khair, S. (2005). Child labor in Bangladesh: A forward looking policy study. ILO: International Program on the Elimination of Child Labor.
- Khan, R. E. (2001). Socioeconomic aspects of child labor - a case study of children in auto workshops. *The Lahore Journal of Economics*, 6(1), 93-112. doi:10.35536/lje.2001.v6.i1.a5
- Khan, S., & Lyon, S. (2015). Measuring children's work in South Asia perspectives from national household surveys. Geneva. Retrieved from [https://www.ilo.org/wcmsp5/groups/public/asia/ro-bangkok/sro-new\\_delhi/documents/publication/wcms\\_359371.pdf](https://www.ilo.org/wcmsp5/groups/public/asia/ro-bangkok/sro-new_delhi/documents/publication/wcms_359371.pdf)
- Kondylis, F., & Manacorda, M. (2012). School proximity and child labor: Evidence from rural Tanzania. *Journal of Human Resources*, 47(1), 32-63.
- Munir, S., & Mangi, H. (2007). Strategies for the prevention of child labor: Strategies for the prevention of child labor: An overview of strategy and effectiveness in Pakistan. In G. Herath, & K. Sharma, *Child Labor in South Asia* (pp. 151-168). Aldershot, England: Ashgate.
- Pope, C. A., Burnett, R. T., Thun, M. J., Calle, E. E., Krewski, D., Ito, K., & Thurstan, G. (2002). Lung, cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution. *Journal of the American Medical Association*, 287(9), 1132-1141.
- Ravallion, M., & Woodon, Q. (2000). Does child labor displace schooling? Evidence on behavioural responses to an enrollment subsidy. *The economic Journal*, 110(462), 158-175. doi:10.1111/1468-0297.00527
- Ray, R. (2000, May). Child labor, child schooling, and their interaction with adult labor: Empirical evidence for Peru and Pakistan. *The World Bank Economic Review*, 14(2), 347-367.

- Ribeiro, H. (2008). Sugar burning in Brazil: Respiratory health effects. *Rev Saude Publica*, 42(2), 370-376.
- Saeed, A. (2017). Business recorder. Retrieved from <https://fp.brecorder.com/2017/05/20170504175631/>
- Saha, C. K., & Hosain, J. (2016). Impact of brick kilning industry in peri-urban Bangladesh. *International Journal of Environment Studies*, 73(4), 491-501. doi:10.1080/00207233.2016.1179014
- Sahu, S., Sett, M., & Gangopadhyay, S. (2010). An ergonomic study on teenage girls working in the manual brick manufacturing units in the unorganized sectors in west Bengal, India. *Journal Hum Ergol*, 39, 23-33.
- Shafiq, M. N. (2007). Household schooling and child labor decisions in rural Bangladesh. *Journal of Asian Economics*, 18(6), 946-966.
- Sharma, B., & Dangal, M. R. (2019). Seasonal child labor in nepal's brick kilns: A study of its educational impact and parents' attitudes towards it. *Journal of Education and Work*, 32(6-7), 586-597. doi:10.1080/13639080.2019.1673886
- Sood, A., Petersen, H., Blanchette, C., Meek, P., Belinsky, S., & Picci, M. (2009). Wood smoke-associated chronic obstructive pulmonary disease (COPD) underappreciated in the United States? *Am J Respir Crit Care Med*, 179.
- Telisman, S., Cvitovic, P., Jurasovic, J., Pizent, A., Gavella, M., & Rocic, B. (2000). Semen quality and reproductive endocrine function in relation to biomarkers of lead, cadmium and copper in men. *Environment Health Perspective*, 108(1), 45-53. doi:10.1289/ehp.0010845
- UNICEF. (1997). *The state of the world's children*. Oxford: Oxford University Press.
- United Nations. (1989, November 20). *Convention on the Rights of Child (CRC)*. Retrieved from OHCHR: <https://www.ohchr.org/en/professionalinterest/pages/crc.aspx>
- Wyrobek, A., Schrader, S., Perreault, S., Fenster, L., Huszaar, G., Katz, D., . . . Evenson, D. (1997). Assessment of reproductive disorders and birth defects in communities near hazardous chemical sites.III. guidelines for field studies of male reproductive disorders. *Reproductive Toxicology*, 11(2-3), 243-259. doi:10.1016/s0890-6238(96)00108-6
- Zakar, M. Z., Zakar, R., Aqil, N., Qureshi, S., Saleem, N., & Imran, S. (2015). "Nobody likes a person whose body Is covered with mud": Health hazards faced by child laborers in the brick kiln sector of the Okara district, Pakistan. *Canadian Journal of Behavioural Science*, 47(1), 21-28.

### **Annexure A: Interview guide for participants**

Age Gender  
Education  
Work hours  
No. of children  
No of children working in brick kilns

Family type  
No. of family members  
Monthly family income  
How long you have been working here?  
Which factors push you to work here?  
How much time do you work in a day?  
What type of work you do in brick kilns? How much do you earn daily?  
How you meet your family expenditures?  
What do you think about the work of your children? Why are they working in the brick kilns?  
What type of work children do in brick kilns? How long do they work every day?  
In what type of living conditions, children live?  
How working in brick kilns affect your children?  
Why your children are not going to school?  
What is your plan for your children's future? Do you want your children live the same life as you?  
Have you heard about government projects towards children of brick kiln 'going school'?  
Did any organization approach you regarding your children?  
What did you do when the government shutdown the brick kilns? How did you manage your expenditures?

#### **Annexure B: Interview guide for stakeholders**

How would you define the situation of child labor in brick kilns in Sheikhpura?  
Why are children involved in work in brick kilns? What are its causes?  
Why parents do not send the children to school? Is there any punishment to hire child labor in brick kilns?  
How child labor in brick kilns affect the children?  
What are the interventions of your organizations to address the issue of child labor in brick kilns? How far those interventions have been successful or unsuccessful?  
What factors hinder addressing the issue of child labor in brick kilns?  
What interventions should government and nongovernmental organizations take to effectively address the issue of child labor in brick kilns?