

Health Issues Faced by Home Based Women Bangle Workers of Hyderabad Sindh, Pakistan

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Keywords	Abstract
Home based, Bangle women workers, Health issues, Poverty, Nutritional status	<i>The aim of this research study designed to identify the health issues faced by women working in the bangle-making industry. In the bangle industry, their economic contribution and health issues have been largely overlooked. The study conducted to investigate the issues and provide the insights into the social obstacles faced by women bangle makers. The study employed to a feminist methodology. Data as collected from 25 women bangle workers through in-depth qualitative interviews. Thus, the findings revealed that these workers experienced a range of dangerous illnesses including tuberculosis, dehydration, suffocation, burning sensation, back pain, joint pain, eye problems, and loss of fingerprints. The bangle workers suffered from different health issues due to the inappropriate and unbalanced nutritional choices. Such health issues disclosed the overall result of unhealthy and unhygienic working conditions. Female bangle workers have not been entitled to compensation or medical assistance in case of any accident that takes place. Occupational health risks received less attention in legislation and implementation, leading to a prevailing attitude of embracing the challenges and limited understanding of how to handle them efficiently. In the sequel, the study discussed the strong opinions in order to address such the challenges for national policymakers and labor organizations in Pakistan.</i>

1. INTRODUCTION

Hyderabad, a city in Sindh, Pakistan, is known for its bangle production, an ancient art that originated in India and was brought to Pakistan by migrants. Women play a significant role in the *bangle-making industry* (Talpur & Talpur, 2022). During the partition of India and Pakistan, Indian emigrants carried the skill of bangle manufacture with them. Migration initiated in 1947; they established themselves in Hyderabad and started the production of bangles on a limited scale (Wali, 2016). Subsequently, the communities nearby also participated in this industry to support their lifestyles, leading to a significant number of individuals choosing bangle making as their occupation (Qureshi, 2017; Pathan et al., 2009). Families outsource half of the work, transforming their homes into small production units, while factories handle the other half. The term "home-based workers" describes women who work informally from home (Raza, 2010). Unregistered, small-scale, with unpredictable income and limited protection, they are known as informal workers. Women workers choose this informal bangle work due to the financial challenges, insufficient qualifications, and societal restrictions (Dhanwaria, 2023). However, estimates showed that more than half a billion people in South Asia, of whom 80% are women, work from home (Qureshi, 2017). The initiatives were made by investors to develop the bangle industry in other cities of Pakistan, but they were unsuccessful since the weather conditions in Hyderabad are most

appropriate for bangle manufacture (Soomro, 2015). The humid climate and the valuable sand from the Indus Riverbed in Hyderabad are used to make bangles, which gives manufacturers a lot of advantages.

A choori, or bangle, is a vibrant and ornamental embellishment commonly worn by women in Asia, offered in a wide range of styles and patterns (Khan, 2012). Choori is often regarded as the most prevalent jewelry item in Pakistan as well. In Pakistan, the demand for glass bangles rises throughout the wedding season and other events, as well as from Eid-Ul-Fitr until Eid-Ul-Azha. Interestingly, during the marriage ceremony, the bride gets bangles from both her parents and her in-laws (Wassan et al., 2010).

i. Workforce in the Bangle Manufacturing Industry

The bangle-producing sector's workforce is predominantly female, and the most workers operating from their own residencies. Women involved in manufacturing work have a crucial role, yet they earn a much lower income compared to men (Wassan et al., 2010). Most of the individuals lack skills, while just a minority receive formal training. They acquire their knowledge of bangle production through apprenticeship with experienced artisans in their own households (Wali, 2016). The primary factors contributing to individuals entering this informal economy are poverty and limited job opportunities. The result of cultural norms and community restrictions, their movement is severely limited. They are prohibited from leaving the premises of the work (Yadav, 2019).

ii. Status of Home-Based Workers in Hyderabad, Sindh

Pakistan has almost 20 million individuals who work from home, with 12 million of this population being women. Home-based work typically refers to work that can be obtained or acquired by individuals at their place of residence. Large-scale manufacturing facilities are utilized, often through middlemen and subcontractors, and carried out within the boundaries of the household (Hassan & Azman, 2014). This profession encompasses a range of activities such as sewing, bonding, embellishing, packaging, and manufacturing bangles, garments, carpets and plastic toys (Wali, 2016). Women who are recognized as home-based workers (HBWs) are not involved in the official economy, which means they are not protected by the current labor regulations and the associated benefits, such as a minimum wage or social welfare programs (Pande, 2023). Due to persistently low salaries and inadequate social security, most home-based women workers live in poverty (Minhas & Khan, 2021).

iii. Home-Based Workers ACT 2018

As stated in the report by APWLD (2021), despite significant protests by trade unions and supporters, the Sindh province officially acknowledged home-based labor and implemented the 2018 Sindh Home-Based Workers Act. The Act is a significant milestone as it is the initial instance of legalizing home-based work, which serves as visible labor and additionally enables women workers to establish a valid foundation for persistently demanding their rights. The primary goal of the Act is to implement a registration system that will enable home-based women workers to be eligible for the different nominations and benefits. According to the legislation, the state has the authority to establish an arbitration committee to address any concerns or conflicts that may arise for HBWs, such as occupational safety and health or wage-related matters (Omolara & Ochieng, 2024). The legislation aims to establish a fund to financially support welfare initiatives for HBWs. Still,

the implementation of the Sindh home-based workers Act has not yet taken place, and there are still problems over the practical challenges of enforcing it to benefit the HBWs (Government, 2018).

1.1. Gaps in Research

Recent research by Brahmaurkaret al. (2013), Bansal and Kumari (2016), Chandra (2009), Khan (2012), and Pande (2008) shows the high level of scholarly interest in India's glass bangle industry. However, the emigrants from India introduced the craft of bangle manufacture in Pakistan during the Indo-Pak division, and Hyderabad-Sindh established to popularity as the hub for Choori production. Millions of South Asians employed as home-based workers, with women representing almost 80% of this sector. As previously stated, home-based workers in Pakistan have been the focus of several research. Most of women home-based workers are part of the underprivileged and disadvantaged group in the informal sector which lacks social and legal rights, and there is no special law in South Asia including Pakistan.

The issues that women bangle workers and the glass bangle industry faced were initially investigated in Pakistan by the Centre for the Improvement of Working Conditions and Environmental, Labor, and Human Resource Department, Government of Punjab, as well as by other researchers like Channa (2003) and the International Labor Office (2004). Other scholars that have worked on this area of study include Shamshad et al. (2015), Qureshi (2017), Home Net (2010), Wassan et al. (2010), Pathan et al. (2009), and Jamali (2007).

The researcher believes that the focus on this topic has led to significant advancements in understanding. However, it has found serious shortcomings in past research. Male researchers conducted most of these studies. Many researchers focused on child labor. Some of them carried out studies in industries that produce glass bangles. The researchers adopted the quantitative approach focusing on the surveys and self-administered questionnaires. The queries asked in such research studies may not correspond with their participant's individual perspective or knowledge of their personal experience. The participants for such research studies as instructed to answer previously determined situations and questions on their coping mechanism while doing the process of producing bangles at home. As a result, the research presented a unidimensional explanation. Mostly the studies conducted on socio-economic conditions and unequal and insufficient wages (Wassan et al.,2010; Pathan et al., 2009). Moreover, studies conducted in India have consistently emphasized the detrimental health effects associated with working in the bangle industry, particularly for women. In addition to respiratory issues, bangle workers are likely to experience musculoskeletal disorders, ocular issues, and a number of other physical illnesses (Khan & Singh, 2015; Bhardwaj & Pandey, 2024). On the other side, no sufficient studies as found on hazardous health issues, these informal workers face while working in bangle making in Pakistan.

This study focused on the range of health-related issues that women face and highlighted the need for a change in mindset and policy. The primary goal of this study relates to the health issues that glass bangle workers experience, specifically as a result of hazardous working circumstances and exposure to hazardous materials at home.

1.2. Aim of the Study

The aim of the current study is to determine what health issues that women workers in the bangle-making sector face.

1.3. Objectives

1. To find out the reason why all members of a family is working in this hazardous work.
2. To determine the health status of Hyderabad city's women bangle industry workers
3. To find out the different occupational hazards and their effects on women's health
4. To determine the health facilities that the employer provides in case of any incident
5. To analyze the government policy initiatives and suggest policy measures to improve their conditions

2. METHOD

The current study based on a feminist approach that emphasizes women as the focus point of this study and intellectual process. The qualitative research strategy enables individuals to examine and analyze their experiences, reflections, everyday activities, interactions and providing them with the opportunity to characterize the world from their own perspective. The ethnographic method applied to collect data as it aligns with a qualitative methodology. The semi-structured, in-depth interviews as administered along with their probing and interactive techniques. The study conducted in urban areas of Hyderabad, focusing on home-based woman bangle workers. The Old City, Latifabad, and the Sindh Industrial and Trading Estate (SITE) areas are numbered as the three locations where the glass bangle manufacturing sector being operated. The study employed purposive sampling technique. Out of the 30 selected respondents, 25 as interviewed through the purposive sampling procedure. After 25 interviews, informational redundancy as reached, and the sampling halted when no new information was forthcoming. Ethical issues such as deception, informed consent, respect for anonymity and confidentiality, and privacy and data storage were considered throughout the research process.

2.1. Data Analysis

The data analysis process is explained as complex and lengthy, involving careful organization and data safety. After transcribing through the back translation technique, data was analyzed by employing the feminist ethnography approach.

3. RESULTS

3.1. Hazardous and Unpleasant Working Conditions

The study revealed that the glass bangle industry in Hyderabad faces hazardous working conditions, including arduous and repetitive labor, poor health, and exposure to high temperatures, unstable materials, and noxious vapors. Both male and female employees face potential hazards, such as damage and burns from handling heated and pointed objects. Women workers in small workshops and homes also face dangers, such as applying heat to glass bangles through ovens or open flames. This highlights the need for improved safety

measures in industry. As stated, one of the female respondents who worked from home as a bangle's worker:

“I have been working for the past 14 years, and now I am 28 years old. My sister and I make bangles for our livelihood. There are 16 people in my large family, including nine sisters. Although this work is extremely dangerous, we had to do it to support ourselves.

43-year-old Rubina Ali shares her story of her bangle making journey, highlighting the potential life-threatening conditions faced by such workers

“I began working when I was just 11 years old, studying in fifth grade, in order to support my family financially for basic needs. Under pressure from my family, I learnt a Murrai skill”.



Figure 1. Women bangles worker's hazardous working condition

Flu-like symptoms, such as watery and irritated eyes and inflammation of the throat and nasal passages, have been linked to exposure to heated glass and fuel fumes. It is thought that continuous exposure to this environment causes serious sickness.

3.2. Danger of Skin Burns and Disease

There is a great cultural significance to the traditional craft of bangle creation, which is frequently done in houses throughout Hyderabad, Sindh-Pakistan. But beyond the glittering adornments' beauty relates a hidden reality: the women who make them, especially those working for smaller businesses, face multiple threats to their health.

i. Furnaces and Sharp Tools: According to the study, those who operate in furnaces that melt, and ship glass are at a high risk of getting burned. Unintentional contact with furnace equipment or molten glass can result in serious burns, long-lasting scarring, and disability. Burns and injuries as reported by the most female bangle workers. Cuts, punctures, lacerations, infections, and long-term nerve damage can result from improper handling or exhaustion.

“I do Sadi work, which involves balancing bangles”. We heat the bangles on a fire burner to balance their points, which are out of proportion, and then press them with the tips of our fingers. Working

continuously results in longer work hours, which causes us to burn our hands and get cuts on them. We also experience significant body discomfort when we lie down to sleep, especially during the summer when we sweat the most and feel hot, which is a result of the low blood pressure issue that troubles us.

ii. Hazards of Chemicals: The chemicals used to clean and polish bangles- can lead to breathing issues, dermatitis, and skin irritation. Due to dealing with the chemicals; Hyderabad women who make bangles and show symptoms of dermatitis. Lead-based paints or dyes, which are used in traditional bangle-making methods that can be detrimental to the kidneys, reproductive system, and nervous system. Due to toxic dust and chemicals that they bring home, children of bangle workers are especially susceptible to lead poisoning.

“The workers' health is at serious risk due to the chemicals used in the process. I hesitate to tell you that my sister died as a result of an ailment that was caused on by the chemicals used in the process affecting her lungs. Frequent exposure to these chemicals in the workplace is detrimental to people.”



Figure 2. Chemicals using to clean and polish bangles

iii. Skin Problems: Home-based workers (HBWs) may suffer from severe skin diseases and exposure to various kinds of chemicals. The following are some common skin issues that Bangle workers typically encounter while working from home.

- a. Dermatitis:** Skin inflammation caused by coming into close touch with allergens or irritants. Redness, itching, burning, dryness, cracking, and blistering counted as some of the symptoms.
- b. Skin Allergies:** Allergies triggered by certain chemicals such as nickel and chromium. Redness, swelling, and itching are just regarded as some of the symptoms.
- c. Chemical Burns:** Chemical burns are often caused by direct contact with acids, solvents, and other harsh chemicals.
- d. Pigmentation Changes:** Hyperpigmentation or hypopigmentation of the skin can result from long-term exposure to certain chemicals.
- e. Fungal Infections:** Humid, warm environments can promote fungal growth on the skin, leading to fungal infections like athlete's foot and ringworm.
- f. Bacterial Infections:** Small cuts and abrasions can become infected with bacteria, causing redness, swelling, pain, and post-discharge.



Figure 3. Woman bangle worker mixing hazardous chemical

3.3. Multifaceted Health Hazards

According to the study, home-based women workers regarded at risk for several health issues as a result of their suffocated living conditions, extended workdays, exposure to hazardous materials, and unhygienic environments. These small homes are extremely confined. They shared a bedroom space with their kids. Their health was put at greater danger due to a heavy load of job and household responsibilities.

i. Ergonomic Risks: Making bangles involves uncomfortable postures and repetitive movements such as polishing, sanding, beading, and engraving. These activities can cause musculoskeletal diseases including carpal tunnel syndrome, neck and low back discomfort, tendinitis, muscular strain, and chronic backaches. Pain and exhaustion can result from frequent hand and wrist movements, which can lead to repetitive strain injuries (RSIs).

"I often had stomachache and gas since I sat in one position all the time. Although we follow a simple diet, we have several issues, such as body and leg pain, as a result of our limited movement. When we continue to sit in this position all the time, we suffer from back pain and other issues throughout our monthly periods. I find it very hard to work during pregnancy, so I take turns between continuing and stopping working".

ii. Musculoskeletal Strain: Home-based women workers frequently experience musculoskeletal diseases (MSDs), which can cause severe pain in knees, joint pain, and backache. This is frequently caused by improper posture when working with flames, particularly during pregnancy and menstruation.

"As the sole source of income for my family, I am obliged to work despite my continuous knee pain from holding a fixed posture. Though working means compromising my health, I'm willing to do it."



Figure 4. Hazardous chemicals used at home by improper posture

iii. Exposure to Hazardous Materials: Workers who make bangles, especially using traditional methods, are exposed to a number of hazardous chemicals. These chemicals cause a variety of health issues when they enter the body through the mouth, nose, or skin. Chemical burns, respiratory problems, and skin irritation may result from exposure to dust, fumes, and chemicals used in the bangle-making process, which included acids, dyes, and polishing compounds.

iv. Ocular Disorders, Infections, and Visual Impairment: Bangle workers operate in conditions with poor lighting. Ocular illnesses, infections, conjunctivitis, corneal ulcers, allergies, and visual impairment are just a few of the conditions that can result from exposure to dust, insufficient ventilation, and debris during engraving and embossing.

“Due to their poor vision, most of the workers in our neighborhood wear eyeglasses. They worked on bangles to adorn them with beads and ornaments, but the glue caused damage to their eyes and burnt their hands when they worked on small bangles. It becomes routine to burn and cut our hands while working”.

v. Breathing Difficulties and Dehydration: Home-based women bangle workers viewed at risk due to insufficient ventilation; harmful fumes and chemicals build up in such cramped, enclosed areas, which can result in dehydration, lung cancer, asthma, TB, and respiratory issues. Paint thinners, sprays, chemicals, and solvents as used for bangle coloring expose female workers to dangerous hazards.

“I suffered asthma because I worked in the dark, with insufficient ventilation, and being close to chemical fumes that are often used in Boond work. For both my mother and me, a considerable portion of our salary goes towards medical bills.

vi. Mental and Emotional Health (Psychological Stress): One essential aspect of total well-being expressed as mental health. The numerous difficulties that home-based women bangle manufacturers are facing have a detrimental effect on their mental health. These workers frequently face low wages and unstable working conditions in addition to the additional burden of long work hours and domestic responsibilities. Numerous health issues, such as anxiety, depression, long-term stress, and hypertension, are exacerbated by such a pattern.

- Economic insecurity and low wages
- Long working hours and lack of work-life balance
- Uncertainty and job insecurity
- Exposure to dangerous material and health concerns
- Lack of control and freedom

"We had to work for our livelihood because this labor is so time-consuming and difficult, so I am unable to properly spend time with my children, who require my attention, and my health is not good." Extreme poverty compels us to labor anyhow. This is the cause of the failure to properly care for our children and concentrate on our own health. They are frequently neglected, and while we are working, they sometimes nearly catch fire. We need to use extreme caution. We experience mental discomfort because, in addition to physical fatigue, our minds are not at ease".

3.4. Loss of Fingerprints

Women who work as bangle makers at home usually lose their fingerprints as a result of unprotected chemical handling. Cleaning glass bangles with hydrofluoric acid can harm the skin, eyes, and respiratory system, and polishing bangles with abrasive powders can cause skin deterioration over time. Because of this loss, women may not be able to get national identity cards, which would limit their access to financial inclusion, voting rights, and government services. In addition, women who lose their fingerprints may experience prejudice and social stigma that affects their possibilities to get married, engage with others, and find work. Social issues might arise when fingerprint loss prevents a person from working, resulting in poverty, food insecurity, as well as income loss.

"I've been working since I was a little child; my fingerprints haven't completely disappeared, but they have faded. I also suffer cuts and bleeding from my fingertips when I unintentionally touch the broken bangle ends at work. Our relative once crushed her fingers".

"Of course, the fingers are grinded, which causes our fingerprints to occasionally fade and causes us to deal with a number of issues. Because of cuts and wounds on their skin, the workers who grind bangles lose their fingerprints. Broken glass bangles that prickle their fingertips cause pain. I faced this issue when I went to process my NIC. The computer did not recognize my fingerprints".

3.5. Lack of Employer Support (Middlemen)

In remote work, the middlemen's role is defined crucially, as they facilitate employment for individuals working from home. The middleman who frequently acts as a representative for the manufacturer or business owner-hires women to work from home and gives them meagre remuneration. Because of his supremacy, he was able to take advantage of their unfavorable conditions. Because of their distance, home-based women workers depend on contractors and middlemen for access to markets and raw materials. However, they are not recognized as official employers by the government, leading to a lack of medical care and cash benefits. Additionally, they lack formal employment status and do not receive compensation or medical facilities in case of accidents or injuries.

"If we work, we are paid; if we don't work, we aren't protected by any kind of policy." We are at their mercy no matter what they do since we occasionally receive our monthly payment late—sometimes even two months after they make their payment”.

"We handle everything on our own, regardless of the situation. My child broke his bangles after falling on them, and I had to pay a fine for it. We don't receive any assistance from the contractors or government”.

When I asked the respondent for assistance in case of any accident or incident, she replied:

"Not at all. The contractor just gives us money that is taken out of our pay cheques in case we have an issue or an accident. Because of the thinner and inflammatory chemical, we needed to look after ourselves”.

3.6. Persistent Poverty

Research task showed that persistent poverty and inflation of essentials force women to engage in home-based bangle work, with nearly 90% of these women’s families living below the poverty line. They struggle to afford necessities such as health facilities, shelter, food, and cannot even afford medicines due to the high cost. This situation necessitates the implementation of social protection measures and related policies to reduce poverty and susceptibility among home-based laborers. They also must care for domestic chores and children, often unable to go outside due to extreme poverty. Gender discrimination and social exclusion also contribute to their reliance on exploitive middlemen. The knowledge and skill of bangle making are often passed down to the generation which feeds the poverty cycle. Children of bangle workers are more likely to continue in their footsteps if they are not given access to education and training.

“After realizing the family's poor financial situation, my sister and I both work at Bangle Making. Despite my preference for school, I assist my sister, and after much effort, I completed my intermediate certificate”.

“I worked seven or eight hours per a day and never received any cash because my father takes all the money I earn. Even though I worked all day, I was unable to buy any of my favorite food. I don't have a brother; I have two sisters. Poverty limits us from purchasing numerous food items. Although I wanted my sister to continue in school and avoid working as a bangle maker, the circumstances and poverty have forced my sisters to enter the same field because we have no other choice. My younger sister is currently working with us after completing her matriculation but being unable to continue her education due to financial constraints.

3.7. Extremely Low Wages

Pakistani women who make bangles at their homes are given meagre pay of 30 to 40 rupees per day, working 12 to 14 hours in an unhygienic environment. There are no specific

rules or regulations on wages, and partial payments are used to control the worker's financial insecurity and dependence on employers. Women are often unable to work outside their domestic environments because of the strict observance of *pardah* and household responsibilities. Even a marginal increment in earned income is welcomed on account of inflation and poverty. The low economic value placed on women's labor is explained as a result of the undervaluation of their free time and domestic contributions. The study highlights the need for better regulations and fair wages for these workers. One of the respondents said:

"The skill of boond work, particularly bangle decorating, is my area of specialty. With a meagre Rs3 per Tora, I am able to produce 50 Toras every day. Due to a lack of long-term financial security, we often accept advances from contractors and are unable to return the loan in full. Despite being a seasonal job, basic everyday necessities don't wait for the seasons to change. I request that, for the same quantity of Tora, the monthly payment increase from Rs 2000 to Rs 6000".

"Due to my father's illness and disability, I was left to handle all family responsibilities. I make about 20 toras a day doing the arts of sadai in Bangle manufacturing, which pays Rs 2.50 each tora. Even if I work seven to eight hours a day, my monthly salary of Rs 2000 is not enough for supporting a family of five".

3.8. Poor Health and Nutritional Status

Home-based women workers, a significant part of the global workforce, often face good health and nutritional status. This disproportionately affects their health and quality of life, leading to health complications and reduced quality of life. This issue illustrated as complex and influenced by factors such as work and socioeconomic status. For a variety of reasons, women who work from home are more likely to experience nutritional deficits. Although their hard work and dedication are well-deserved, their nutritional status and general health are at risk in this perspective.

- a. Low Income and Food Access:** Low-income, informal sector job limiting access to nutritious food as reasoned for home-based women workers. Variations in income brought on by market demand, seasonality, etc., that may result in inconsistent access to nutritious foods.
- b. Neglecting Self-Care:** Women who manage a lot of duties including childcare and housework-have little time for cooking and eating healthily. Working long hours can cause dietary disruptions and deficits in vital nutrients.
- c. Lack of Awareness:** Limited access to balanced diet and health information education can lead to unhealthy food choices. A lack of awareness of the nutritional value of various food items and the significance of a balanced diet might make it more difficult to make appropriate food choices.
- d. Sociocultural Norms:** Gender roles in societal norms favoring male family members can lead to neglect of personal nutritional needs. Dietary diversity and nutrient intake may be restricted due to traditional cultural beliefs that some food items are inappropriate for pregnant or nursing women.

- e. **Inadequate Sanitation and Hygiene:** Food-borne infections are more likely to occur in conditions with poor sanitation and hygiene. Occupational hazards like exposure to dust, chemical fumes, and other harmful substances can affect appetite and digestion.
- f. **Working Hours and Physical Demands:** A balanced diet is more important since long workdays and physically taxing jobs can deplete stored energy. Repetitive strain injuries and musculoskeletal pain can limit physical activity and energy expenditure.

“I faced chronic illness and pallor in my early years as a result of poor diet. The doctor advised relaxation, but because of financial limitations, I must work with my family. After dedicating thirty years of my professional life to this effort, I was diagnosed with Hepatitis C. I did not receive any cash rewards or medical help from the supplier or contractor once my time working as a bangle maker ended. The person conveyed deep sorrow about the use of her sister's hard-earned funds for her medical treatment, feeling that it is being wasted”.

“We serve our male family members whatever is prepared for dinner first, and then we eat the leftovers, giving them preference”.
“Pregnant ladies require extra attention and nutritious food. I prefer to eat something different around this time, but I am unable to do so because of my financial situation. She means that a woman may experience cravings for certain foods during her pregnancy”.

4. DISCUSSION AND CONCLUSION

Throughout Asia, females frequently wear bangles, a form of colorful decorative item, in a variety of styles. The glass bangle industry in Pakistan is considered one of the most significant sectors (Talpur & Talpur, 2022). Home-based women workers valued as the essential component of this research study and centered on the fascinating and little-known realm of bangle manufacture in the informal sector. Making bangles reasoned as a traditional household occupation that has been passed down through the generations. Similarly, Pande (2023) also illuminated the same findings meanwhile the outcome of the current study indicates that their wages explained as very low, ranging from about 30 to 35 per Tora, or 300 bangles. Further, Talpur & Talpur (2022) study resulted that social cultural barriers, gender bias, and social restrictions further increase their vulnerability. Thus, it is estimated that the compensation offered is below the government's minimum wage. The current study findings are also in line with the study of Ghosh et al. 2013). Children who live and work in cramped, small, poorly ventilated places run the risk of being exposed to dangerous dust, pollutants, and noise, which raises the possibility of incidents and injuries (Ghosh et al, 2013). Lakho et al. (2022) study also supports the current study findings that home-based woman bangle workers suffered from respiratory illnesses like conjunctivitis, allergies, arthritis, bronchitis, asthma, and tuberculosis due to lack of ventilation, air pollution, overcrowding, limited and poor lighting, and direct exposure to fire, glass, and chemicals increase the risk of burns, chemical allergies, wounds, and skin infections. A similar study that was published in the Journal of Pakistan Medical Association in 2017 found that 60% of Hyderabad's female bangle workers had dermatitis, which was connected to their employment with these chemicals. Women who lose their fingerprints frequently struggle to get National Identity Cards, which limits their access to financial inclusion, voting rights, and government services (Correspondent, 2013). The present study also revealed a significant concern about food deficiencies brought on by low pay having a detrimental impact on the health of female

freelance workers who work from home. Based only on their income, they are unable to purchase food which leads to malnutrition and worsens their health. Due to a lack of sanitary facilities and a shortage of nutrient-dense food, poverty exacerbates digestive issues and lowers general health.

Furthermore, conditions of glass bangle women workers are common in almost all the respondents. The main cause that places these women bangle workers at risk is their hazardous occupational work; the impact of their work gets them closer to life-threatening health issues. They acquired this family traditional work from their forefathers. Poverty is the main cause they are working in such dangerous conditions for their livelihood. It is also reported that the glass bangle workers are deprived by the employer and contractors of getting any compensation and incentives in case of any incidents. No safety tool is provided to the workers by the contractor or employers of the glass bangle industry. The registration of glass bangle women workers is awaited yet; the law has been passed by the government of Sindh; however, the implementation remains in this way.

4.1. Recommendations

The findings would provide valuable insights for policymakers to improve the working conditions and well-being. The study also highlights the potential for economic empowerment if government support and formal recognition are provided in this manner. These women can develop a regular source of revenue from the bangle sector while adopting health and safety precautionary measures in the workplace. The bangle industry faces the occupational health risks that women face, which have been largely neglected in this perspective. To address these risks, recommendations include using helmets, protective glasses, flame resistance, rubber gloves, gowns, and appropriate footwear. NGOs can educate female bangle workers about chemical risks and safety measures, while media should disseminate information to the general community. Employers should equip women's workplaces with the essential safety devices, and labor laws and regulations should be strengthened to enforce safety standards. Support for female bangle workers who have lost their thumbprints should be given top priority by the government, which should also keep an eye on investors and contractors to make sure rules are being followed in this perspective.

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