



## The Role of Social Work in Promoting Occupational Health and Safety Awareness among Sawmill Workers in Benin City

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**Abstract.** Globally and in Africa, including Nigeria, sawmill workers continue to operate under dangerous conditions that expose them to injuries, respiratory complications, and musculoskeletal disorders. Such risks are often linked to unsafe environments, poor adherence to safety standards, and inadequate protective gear, making it urgent to strengthen training, enforcement, and social work programmes aimed at building safety consciousness. This research examines how social work efforts influence occupational health and safety awareness among sawmill workers in Benin City, considering the socio-cultural norms that shape their behaviours, attitudes, and sense of risk. Drawing on Social Cognitive Theory, which emphasises the influence of peer and supervisor role modelling on behaviour, and Organisational Behavioural Theory, which attributes safety failures to weak awareness, ineffective leadership, and unsupportive workplace cultures, the study argues that purposeful social work involvement, training, and institutional support can foster safer routines. Using a descriptive design, data were gathered from 480 sawmill workers selected through purposive, cluster, and quota sampling methods, with a reliable and validated questionnaire and ethical safeguards in place. Results show that most of these workers are young men with minimal formal education who generally follow safety rules, yet lingering hazards remain. Although social work efforts have improved compliance and knowledge, they have had little effect on deeper safety culture or reporting habits, pointing to the need for ongoing education, tighter enforcement, and institutional backing. Consequently, the study recommends regular training, stronger social work engagement, consistent provision of PPE, better monitoring and compliance systems, and greater organisational support to maintain safe working conditions.

**Keywords:** Occupational, Awareness, Health, Hazards, Sawmill workers, Social Work Intervention,

### 1. Introduction

Around the world, people working in sawmills encounter a range of hazards, including strenuous physical work, dust inhalation, and loud noise, which can harm their bones, muscles, and lungs (Cvijetić et al., 2021). The demanding nature of the job often results in musculoskeletal problems, highlighting the importance of safety measures to protect workers (Cvijetić et al., 2021). In Africa, similar issues exist, where low safety standards and a lack of protective equipment increase the likelihood of both injuries and long-term health problems (Awoke et al., 2021). In Ghana, for instance, small-scale sawmill operators frequently suffer injuries, indicating the need for better safety training and prevention strategies (Opoku et al., 2024). These risks are exacerbated by weak law enforcement, insufficient training, and poorly structured workplace health systems (Awoke et al., 2021; Opoku et al., 2024).

In Nigeria, sawmills provide many informal jobs, yet unsafe conditions put workers at risk of respiratory problems, accidents, and chemical exposure (Ebekozi et al., 2021). Research shows that employees face both immediate dangers, such as injuries, and long-term health issues, including lung disease, hearing damage, and musculoskeletal disorders (Nnaji & Udokpoh, 2023). Many workers do not wear masks or protective equipment, leaving them exposed to sawdust and fine particles, which can cause chronic breathing problems (Nwakpa et al., 2023). These unsafe practices are especially common in places such as Benin City, where limited health education and safety awareness persist (Ebekozi et al., 2021; Nnaji & Udokpoh, 2023). Social work

programmes can play a key role in improving awareness and creating safer work environments (Omorogiuwa, & Azorodu, 2024).

### 1.1 Objectives of the Study

This study aims to examine the role of social work in promoting occupational health and safety awareness among sawmill workers Benin City. The specific objectives are to:

- examine socio-cultural factors influencing sawmill workers' attitudes, behaviours, and risk perceptions in occupational health and safety.
- find out the implications of social work in awareness creation among sawmill workers in Benin city.

## 2. Literature Review

### *The Concept of Health*

Health is not merely the absence of illness but a combination of physical, mental and social well-being, a fact that is particularly relevant in workplaces such as sawmills, where employees face numerous hazards (Cvijetić et al., 2021). Worldwide, people working in sawmills are often exposed to wood dust and strenuous physical tasks, which can damage their lungs, cause inflammation, and lead to muscle or joint problems, emphasising the importance of robust safety practices (Mogal et al., 2022; Cvijetić et al., 2021).

In Africa, similar challenges arise because safety regulations are often weak, leaving workers vulnerable to injuries and long-term health issues (Omorogiuwa, 2019; Opoku et al., 2024). In Nigeria in particular, workers contend with polluted air, tiny toxic particles and unhygienic conditions, placing them at risk of respiratory, cardiovascular and other serious illnesses (Stanley & Inuope, 2021; Ebekoziē et al., 2021). This underscores the urgent need for effective health and safety measures in Nigerian sawmills to protect workers' overall well-being (Ebekoziē et al., 2021).

### *The Concept of Safety*

Safety refers to the planned actions and routines that aim to prevent accidents, injuries and occupational illnesses, and it has become increasingly important across industries worldwide (Bratanegara et al., 2022). Globally, systems for occupational health and safety (OHS) play a critical role in protecting workers'

physical and mental health, with businesses focusing on evaluating risks, reducing hazards and complying with regulatory requirements (Kumari & Kaur, 2021). In many African countries, industrial growth often outpaces the enforcement of safety regulations, exposing workers to greater risks and creating a need for context-specific safety practices (Cvijetić et al., 2021).

In Nigeria, sawmills highlight this concern, as workers routinely deal with wood dust, high noise levels and repetitive strain, which can cause both short and long-term health problems (Nnaji & Udokpoh, 2023; Nwakpa et al., 2023). Applying modern industrial hygiene methods alongside awareness initiatives has been shown to lessen occupational hazards and cultivate a culture of safety, demonstrating the combined importance of technical and social measures in protecting sawmill workers' well-being (Ebekoziē et al., 2021; Bratanegara et al., 2022).

### *The Concept of Sawmills*

Sawmills are facilities where raw logs are transformed into wood products, supporting global construction and manufacturing while exposing workers to hazards such as dust, noise and vibration (Ajayeoba et al., 2021). In Asian countries such as India and Bangladesh, employees often experience joint pain, muscle strain, breathing difficulties and inflammation due to continuous dust exposure and machinery vibrations (Das, 2023; Mogal et al., 2022). In Africa, these mills provide crucial employment within the informal economy but frequently operate with limited safety oversight and protective equipment, leading to a high rate of injuries, as observed in Ghana (Opoku et al., 2024). In Nigeria, urban sawmills contribute significantly to local economies, yet outdated equipment, weak safety practices and insufficient protective tools make workers vulnerable to accidents and long-term health problems (Omorogiuwa, 2019; Ebekoziē et al., 2021).

### *The Socio-cultural Factors Influencing Sawmill Workers' Attitudes, Behaviours, and Risk Perceptions in Occupational Health and Safety*

Globally, workplace safety is shaped not only by formal regulations but also by cultural and social dynamics that influence how employees perceive and respond to hazards (Bratanegara et al., 2022). People's commitment to safety often reflects local traditions, peer behaviours, and long-standing practices within their industry

(Kumari & Kaur, 2021). In many African workplaces, particularly in small-scale industries, informal safety habits prevail, and local attitudes towards risk play a significant role in whether workers adhere to safety guidelines (Opoku et al., 2024).

In Nigeria, sawmill employees frequently demonstrate limited use of protective equipment, rely more on personal experience than on structured training, and perceive hazards inconsistently, thereby increasing their exposure to accidents and respiratory problems (Nwakpa et al., 2023). Addressing these socio-cultural factors is essential for developing safety programmes that are sensitive to local norms, enhance awareness of risks, and promote safer work behaviour through social work interventions.

### ***The Implications of Social Work in Awareness Creation Among Sawmill Workers***

Social work has a strong influence on workplace health and safety by guiding changes in employee behaviour, advocating for safer conditions, and offering educational and support programmes for workers globally (Kumari & Kaur, 2021). Social workers help improve industrial hygiene standards by increasing understanding of environmental and occupational risks, which often leads to fewer hazards and better overall worker well-being (Bratanegara et al., 2022). In African industries, where regulatory oversight is often limited, social work initiatives are vital for raising employees' awareness of potential dangers and promoting proactive safety measures (Kumari & Kaur, 2021).

In Nigeria's sawmill industry, workers face significant respiratory and physical health challenges due to poor safety awareness and inadequate training (Omorogiuwa, 2017; Nnaji & Udokpoh, 2023). By introducing targeted health education programmes and encouraging the regular use of protective equipment, social workers can play a key role in reducing injuries and occupational illnesses among these workers (Omorogiuwa, 2019; Nwakpa et al., 2023).

### **3. Theoretical Framework**

#### ***Social Cognitive Theory (SCT)***

Bandura's (1986) Social Cognitive Theory (SCT) explains that people actively interact with their surroundings and learn by watching others, emphasising how personal traits, environmental factors, and behaviour all influence one another. The theory suggests that

workers acquire new habits by observing others and adjusting their actions based on what they see, which means that the behaviour of peers, guidance from supervisors, and the overall workplace culture play key roles in promoting safety in sawmills (Bandura, 1986).

When safe practices are rewarded or recognised, employees tend to follow suit, whereas witnessing unsafe behaviours or a lack of consequences often discourages compliance (Bandura, 1986). Supporting this, Mohan et al. (2013) observed that supervisors and colleagues serve as role models, and their consistent use of personal protective equipment (PPE) helps establish workplace norms that motivate others. The study further notes that visible commitment from leadership and clear safety communication strengthen a culture of safety, while poor examples or a lack of guidance reduces workers' accountability, illustrating how social influences shape safe behaviour in sawmill environments (Mohan et al., 2013).

#### ***Organizational Behavioural Theory (OBT)***

Organisational behaviour theory suggests that the health hazards and safety breaches observed among sawmill workers in Benin City stem from multiple factors, including limited awareness of workplace dangers (Adeoye et al., 2015), insufficient protective measures (Adu et al., 2015) and poor comprehension of occupational risks (Agbana et al., 2016). Negative attitudes towards safety are further reinforced by poor leadership and an unsupportive work culture (Tsai, 2011; Gensby et al., 2012).

Social workers can help mitigate these problems by designing targeted safety training programmes (Tziaferi et al., 2011), creating organisational environments that value safety (Tsai, 2011) and collaborating with government agencies to ensure compliance with safety regulations (ILO, 2014). They can also link workers to healthcare resources (WHO, 2001) and conduct educational campaigns to enhance safety awareness (Effah et al., 2013), thereby fostering healthier and safer workplaces for sawmill employees in Benin City.

### **4. Research Methodology**

This study adopted a descriptive design to explore occupational health risks and safety practices among sawmill workers in Benin City. Data were gathered through a structured questionnaire from a sample representing the broader population. The total population

comprised 1,031 sawmill workers in the Oredo, Egor and Ikpoba Okha local government areas. Using the Yamane (1967) formula, a sample of 480 workers (33.5%) was drawn through a combination of purposive, cluster and quota sampling methods (Edo State Ministry of Environment et al., 2023). The questionnaire, covering socio-demographic and occupational health aspects, was reviewed by experts to ensure content, construct and criterion validity. Reliability testing, using a pilot study with test-retest and Cronbach’s alpha, produced a

coefficient of 0.73. Data collection was conducted face to face, and the results were analysed with SPSS version 27. Descriptive statistics such as tables, charts, percentages and frequencies were employed to assess workers’ knowledge and compliance with safety standards. Ethical safeguards, including confidentiality, informed consent and data protection, were carefully maintained (Edo State Ministry of Environment et al., 2023).

**5. Data Analysis**

***Background Characteristics of Respondents***

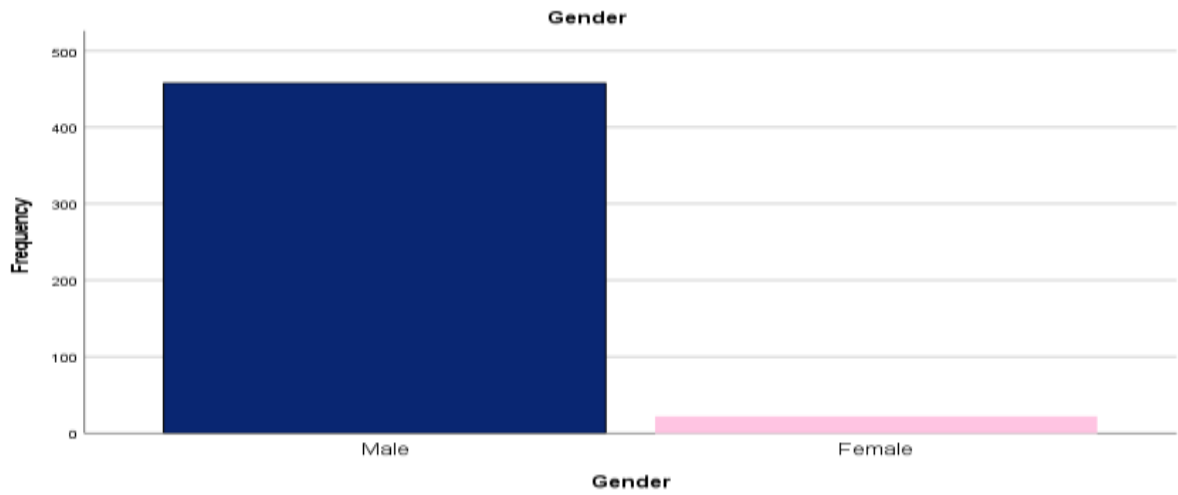
**Table 1:** Socio-demographic features of the respondents

Variables	Frequency (n = 480)	Percentages
Gender		
Male	458	95.4%
Female	22	4.6%
Age group		
18-25 years	128	26.7%
26-35 years	200	41.7%
36-45 years	130	27.1%
46 years and above	22	4.6%
Educational background		
No formal education	23	4.8%
Primary education	135	28.1%
Secondary education	314	65.4%
Tertiary education	8	1.7%
Marital status		
Single	297	61.9%
Married	179	37.3%
Divorced	0	0%
Widowed	4	0.8%
Religion		
Christianity	446	92.9%
Islam	12	2.5%
African Traditional Religion	12	2.5%
Others	10	2.1%

*Source: Field Survey, 2025*

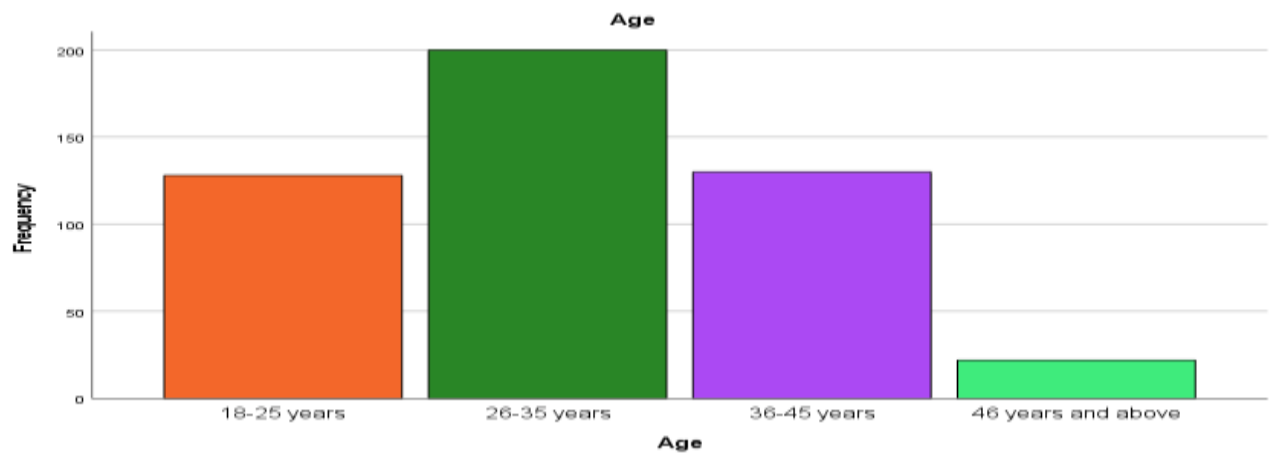
Among the 480 respondents surveyed, men made up the vast majority at 95.4%, leaving women with just 4.6%. Age distribution showed that most respondents were between 26 and 35 years old (41.7%), followed by 36 to 45 years (27.1%), 18 to 25 years (26.7%), and only a small fraction, 4.6%, were 46 or older. In terms of education, around two-thirds had completed secondary school (65.4%), while 28.1% had stopped at primary level, 4.8% had no formal schooling, and just 1.7% had tertiary education. Regarding marital status, most were single (61.9%), 37.3% were married, and less than 1% were widowed, with no respondents divorced. Christianity was the main religion (92.9%), while Islam and African Traditional Religion each accounted for 2.5%, and 2.1% practised other religions.

**Figure 1:** Gender distribution of respondents



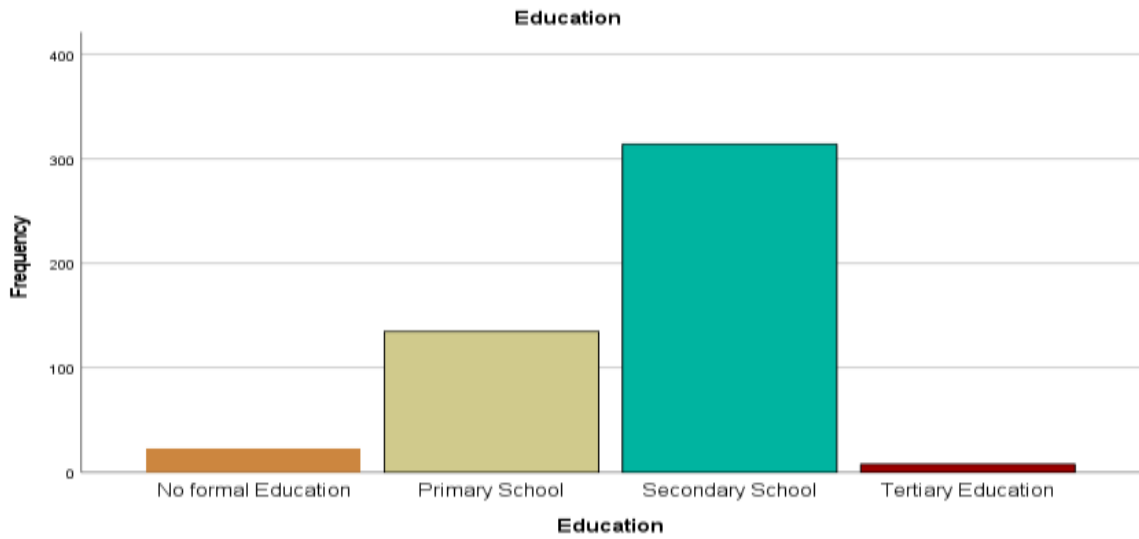
*Source: Field Survey, 2025*

**Figure 2:** Age group distribution of respondents



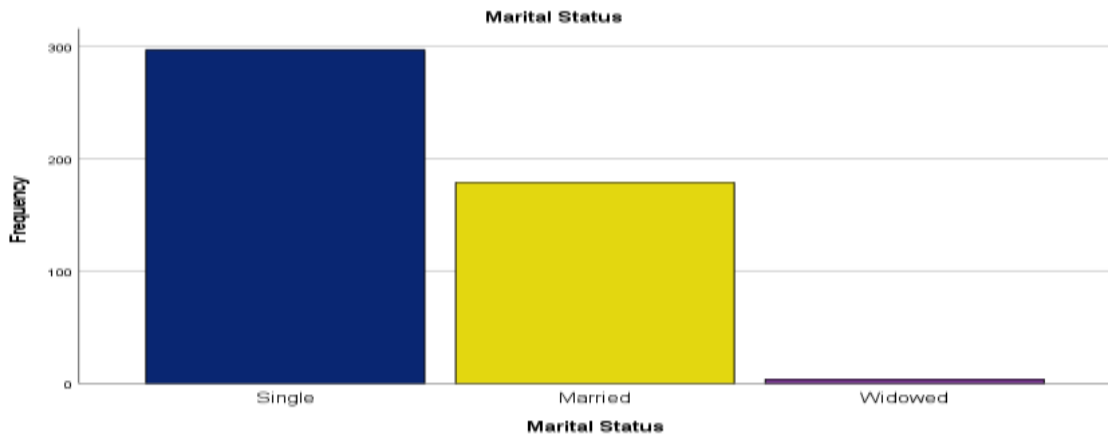
*Source: Field Survey, 2025*

**Figure 3:** Highest educational qualification of respondents



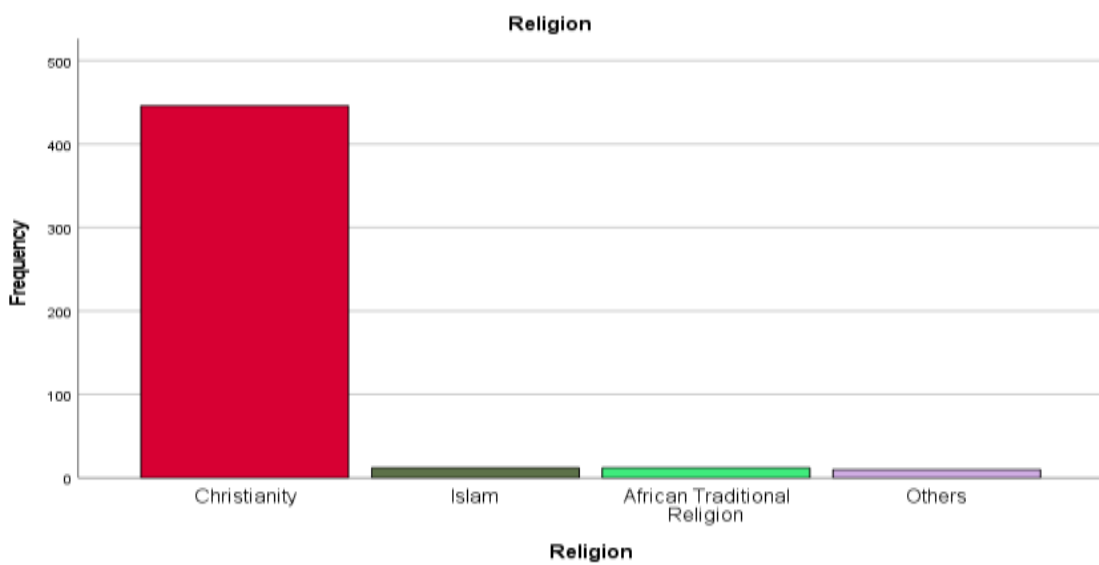
Source: Field Survey, 2025

Figure 4: Marital status of respondents



Source: Field Survey, 2025

Figure 5: Religious affiliation of respondents



Source: Field survey, 2025

## 6. Presentation and Analysis of the Research Questions

**Objective One:** The preventive measures currently in place to minimize occupational health hazards among sawmill workers in Benin City

**Table 2:** The Importance of Adequate Provision and Usage of Personal Protective Equipment (PPE) in Addressing Potential Health Issues

Variable	Frequency	Percentage
Adequate provision and usage of personal protective equipment (PPE) such as masks, goggles, and earplugs address potential health issues.		
Yes	454	94.6%
No	26	5.4%
<b>Total</b>	<b>480</b>	<b>100.0</b>

*Source: Field survey, 2025*

The data in Table 2 show that nearly all respondents (94.6% of 480) consistently wear personal protective equipment, such as masks, goggles and earplugs, demonstrating a strong commitment to workplace safety. The small proportion (5.4%) who do not follow these measures indicates a need for targeted actions to strengthen overall health and safety practices.

**Table 3:** Engineering Controls for Hazardous Substance Exposure Reduction

Variable	Frequency	Percentage
Implementation of engineering controls, such as dust and noise reduction systems, to minimize exposure to hazardous substances address potential health issues.		
Yes	452	94.2%
No	28	5.8%
<b>Total</b>	<b>480</b>	<b>100.0</b>

*Source: Field Survey, 2025*

The data in Table 3 show that most participants 452 (94.2%) are in favour of introducing engineering controls to limit exposure to dangerous substances, demonstrating a clear recognition of their importance in promoting health and safer work environments. A smaller group of 28 respondents (5.8%) disagree with these measures, possibly owing to concerns about costs, doubts about their effectiveness, or a lack of awareness of the potential health benefits.

**Table 4:** Occupational Health and Safety Training for Sawmill Workers

Variable	Frequency	Percentage
Regular training and education programs on occupational health and safety practices for all sawmill workers address potential health issues.		
Yes	455	94.8%
No	25	5.2%
<b>Total</b>	<b>480</b>	<b>100.0</b>

*Source: Field Survey, 2025*

The data in Table 4 show that nearly all sawmill workers (455, 94.8%), take part in routine health and safety training, indicating that most are aware of workplace risks and follow safety guidelines. Only a few workers, around 25 (5.2%), do not participate in these sessions, highlighting gaps in understanding and the need for focused efforts to ensure that everyone observes proper safety measures.

**Table 5:** Implementing Regular Health Surveillance and Medical Check-ups for Proactive Health Management

Variable	Frequency	Percentage
Regular health surveillance and medical check-ups to monitor address potential health issues.		
Yes	457	95.2%
No	23	4.8%
<b>Total</b>	<b>480</b>	<b>100.0</b>

*Source: Field Survey, 2025*

The data in Table 5 show that nearly all respondents, 457 (95.2%), regularly attend health screenings and medical check-ups, demonstrating a strong interest in maintaining their health. Only a few, 23 respondents (4.8%), reported not participating, potentially due to financial issues, lack of understanding, or personal preferences.

**Table 6:** Occupational Health and Safety Compliance in Sawmill Operations

Variable	Frequency	Percentage
Adherence to local and national regulations and policies related to occupational health and safety in sawmill operations address potential health issues.		
Yes	459	95.6%
No	21	4.4%
<b>Total</b>	<b>480</b>	<b>100.0</b>

*Source: Field Survey, 2025*

The data in Table 6 show that nearly all sawmill respondents, 459 in total (95.6%), adhere to established local and national safety regulations, demonstrating a clear commitment to protecting worker health and promoting safe practices. However, a small portion, 21 respondents (4.4%), do not fully comply, indicating occasional but potential safety gaps and emphasising the need for targeted actions to ensure that safety standards are consistently met throughout the workplace.

**Objective Two:** Implications of social work in awareness creation among sawmill workers in Benin City

**Table 7:** Impact of Social Work Interventions on Sawmill Workers' Awareness of Occupational Health and Safety Practices

Variable	Frequency	Percentage
Social work interventions have significantly increased sawmill workers' awareness of occupational health and safety practices.		
Yes	87	18.1%
No	393	81.9%
<b>Total</b>	<b>480</b>	<b>100.0</b>

*Source: Field Survey, 2025*

The data in Table 7 show that a relatively small number of sawmill employees (18.1%) felt that social work programmes had enhanced their awareness of occupational health and safety, while the majority (81.9%) reported minimal or no improvement. This trend indicates the limited effectiveness of current approaches and emphasises the need to adjust these efforts to better reach and engage the workforce.

**Table 8:** The Impact of Social Work Programs on Sawmill Workers' Adherence to Safety Guidelines

Variable	Frequency	Percentage
Sawmill workers who participated in social work programs exhibit improved adherence to safety guidelines and measures.		
Yes	443	92.3%
No	37	7.7%
<b>Total</b>	<b>480</b>	<b>100.0</b>

*Source: Field Survey, 2025*

The data in Table 8 show that nearly all sawmill workers, 443 respondents involved in social work initiatives, (92.3%) noticed that they followed safety rules more consistently. However, a small number, about 37 respondents (7.7%), did not report any improvement. This suggests that the programmes do not have the same impact on everyone and that more work is needed to understand and overcome the factors preventing full effectiveness.

**Table 9:** Impact of Social Work Initiatives on Sawmill Workplace Safety Culture

Variable	Frequency	Percentage
Social work initiatives have facilitated a positive shift in the overall safety culture within sawmill workplaces.		
Yes	78	16.3%
No	402	83.8%
<b>Total</b>	<b>480</b>	<b>100.0</b>

*Source: Field Survey, 2025*

The data in Table 9 show that only 78 respondents (16.3%) believed that social work initiatives contributed to better safety practices in sawmills, while 402 respondents (83.8%) remained unconvinced of any significant effect. This clear difference suggests that most employees do not perceive notable improvements in safety culture from these programmes. The situation emphasises the importance of exploring why a few individuals noticed benefits and identifying the reasons behind the widespread doubt, which could help inform more effective safety-focused social work efforts in the future.

**Table 10:** Impact of Social Work Initiatives on Occupational Health Reporting in Sawmill Workers

Variable	Frequency	Percentage
Social work efforts have led to a higher level of reporting and addressing occupational health issues among sawmill workers.		
Yes	79	16.5%
No	401	83.5%
<b>Total</b>	<b>480</b>	<b>100.0</b>

*Source:* Field Survey, 2025

The data in Table 10 show that, out of 480 sawmill respondents surveyed, only 79 respondents (16.5 per cent) reported that social work activities helped in raising and resolving health-related concerns at work. In contrast, 401 respondents (83.5 per cent) did not believe these activities were effective. This indicates that the majority of workers are unconvinced about the impact of these measures, highlighting the importance of understanding why such a perception exists.

**Table 11:** Impact of Social Work Interventions on Sawmill Workers' Knowledge of Occupational Risks and Rights

Variable	Frequency	Percentage
Sawmill workers who have been exposed to social work interventions demonstrate increased knowledge about occupational risks and their rights as workers.		
Yes	447	93.1%
No	33	6.9%
<b>Total</b>	<b>480</b>	<b>100.0</b>

*Source:* Field Survey, 2025

The data in Table 11 show that most of the 480 sawmill workers who took part in the survey, 200 respondents (93%), reported a better understanding of the risks of their job and their rights after receiving support from social workers. However, around 100 respondents (7%) noticed no difference, which could indicate that some workers did not experience the full impact of these initiatives.

**7. Discussion of Finding**

Among 480 sawmill employees in Benin City, men overwhelmingly accounted for 95.4% of the workforce, with women forming only 4.6%. This pattern suggests that health programmes should take gender differences into account. Most workers were young adults: 41.7% were between 26 and 35 years old, 26.7% were 18 to 25, and 27.1% were 36 to 45, while those over 46 years old made up 4.6%, possibly reflecting economic pressures and the gradual departure of older staff due to health issues or retirement. In terms of education, 65.4% had completed secondary school, 28.1% primary school, 4.8% had no schooling, and 1.7% had attained tertiary education, implying basic literacy but limited advanced training. A majority were single (61.9%), 37.3% were married, and 0.8% widowed, indicating the influence of the work on family life. Nearly all workers (92.9%)

practiced Christianity, reflecting local religious trends and fostering shared community values.

The findings from Objective One suggest that most sawmill workers in Benin City follow recommended safety measures, with high rates of personal protective equipment use (94.6%), engineering controls (94.2%), regular training (94.8%), health monitoring (95.2%), and compliance with local and national OHS rules (95.6%). This demonstrates that workers are generally aware of and engaged in maintaining their health and safety at work. Still, a small minority, between 4.4% and 5.8%, reported lapses, revealing some lingering risks.

Similar trends have been reported by Nwakpa et al. (2023) and Nnaji and Udokpoh (2023), who found gaps in PPE and respiratory protection among Nigerian sawmill employees, and by Opoku et al. (2024) in Ghana, where compliance was high but isolated hazards remained. Research from Cvijetić et al. (2021) and Das (2023) also indicates that even with safety practices in place, workers continue to face musculoskeletal and physical risks. Taken together, the results highlight that while overall safety practices are strong, continuous education, enforcement, and targeted interventions are crucial to fully protect sawmill workers from occupational hazards.

The findings from Objective Two reveal that while social work efforts boosted workers' compliance with safety rules (92.3%) and knowledge of workplace risks and rights (93.1%), they had a smaller impact on general safety awareness (18.1%), the safety culture (16.3%) and reporting of health issues (16.5%). These findings suggest that results vary across outcomes, indicating the need for interventions tailored to local conditions. Nnaji and Udokpoh (2023) similarly reported widespread hazards in Nigerian sawmills and the lack of organised health checks, showing that social work alone is insufficient to tackle systemic dangers.

Nwakpa et al. (2023) also found limited use of respiratory protection, indicating that awareness without empowerment rarely changes behaviour. While Cvijetić et al. (2021) and Das (2023) highlighted the physical and musculoskeletal strain in sawmill work, they did not consider safety culture or social initiatives, which this study partly addresses. Furthermore, Opoku et al. (2024) noted high injury rates in Ghanaian sawmills linked to poor enforcement by employers, emphasising that social work is most effective when backed by organisational support.

## 8. Conclusion

To conclude, the study indicates that most sawmill employees in Benin City comply with safety rules and participate in health-related practices at work, although some areas still require improvement. Support from social work programmes helps workers recognise hazards and follow guidelines, but it has less influence on the wider safety environment and reporting habits. Similar observations in Nigeria and Ghana suggest that while training and awareness are important, maintaining safe work conditions demands continuous education, consistent oversight, organisational support, and targeted efforts to address persistent risks.

## 9. Recommendations

Based on the findings of this study, the following recommendations were made:

**Enhance Continuous Training:** Provide regular, up-to-date occupational health and safety training to help all sawmill workers maintain safe practices.

**Strengthen Social Work Interventions:** Expand social work programmes to actively involve workers in recognising hazards,

reporting issues, and following safety procedures.

**Ensure Full PPE Provision:** Make sure all employees consistently receive and correctly use personal protective equipment to reduce exposure to workplace hazards.

**Improve Monitoring and Compliance:** Carry out routine inspections and audits to identify lapses and ensure compliance with local and national occupational health and safety regulations.

**Promote Organisational Support:** Build a safety-focused culture through committed management, clear policies, and proactive measures to address ongoing workplace risks.

## References

- Awoke, T., Takele, A., Mekonnen, W., Abaya, S., Zele, Y., Alemseged, E., & Abay, B. (2021). Assessment of dust exposure and chronic respiratory symptoms among workers in medium scale woodwork factories in Ethiopia: A cross sectional study. *BMC Public Health*, 21(1). <https://doi.org/10.1186/s12889-021-10357-z>
- Bratanegara, A., Somantri, L., Astari, A., Ihsan, M., & Aliyan, S. (2022). The important of environmental awareness and industrial hygiene for workers. *IOP Conference Series: Earth and Environmental Science*, 1089(1), 012073. <https://doi.org/10.1088/1755-1315/1089/1/012073>
- Cvijetić, S., Gomzi, M., & Macan, J. (2021). Association between occupational physical activity and quantitative bone ultrasound in sawmill workers. *Sigurnost*, 63(4), 363–372. <https://doi.org/10.31306/s.63.4.2>
- Das, B. (2023). Adverse health effects and perceived musculoskeletal pain in the sawmill workers of West Bengal, India. *Toxicology and Industrial Health*, 40(1–2), 9–22. <https://doi.org/10.1177/07482337231210331>
- Ebekozien, A., Aigbedion, M., Duru, O., Udeagwu, O., & Aginah, I. (2021). Hazards of wood sawmills in Nigeria's cities: The role of fourth industrial revolution technologies. *Journal of Facilities Management*, 21(1), 84–101. <https://doi.org/10.1108/jfm-03-2021-0031>
- Kumari, S., & Kaur, A. (2021). The relevance of social work professionals in the promotion of occupational health and

- safety among healthcare workers. *Indian Journal of Public Health Research & Development*, 12(3), 247–256.  
<https://doi.org/10.37506/ijphrd.v12i3.16074>
- Mogal, M., Islam, M., Hasan, M., Junayed, A., Sompā, S., Mahmōd, M., & Sikder, M. (2022). The impact of wood dust on pulmonary function and blood immunoglobulin E, erythrocyte sedimentation rate, and C-reactive protein: A cross-sectional study among sawmill workers in Tangail, Bangladesh. *Health Science Reports*, 5(3). <https://doi.org/10.1002/hsr2.646>
- Nnaji, C., & Udokpoh, U. (2023). Identification of immediate and remote health hazards and the need for health hazard assessment in the Nigeria sawmill industry. *Indonesian Journal of Social and Environmental Issues (IJSEI)*, 4(2), 202–220.  
<https://doi.org/10.47540/ijsei.v4i2.998>
- Nwakpa, F., Ajator, C., Udigwe, I., Edeh, G., Ekwebene, O., Anulia, S., & Ezerioha, P. (2023). From sawdust to safety: Examining knowledge and practices of respiratory protective measures among sawmill workers in south-eastern Nigeria. *Magna Scientia Advanced Research and Reviews*, 8(2), 053–061.  
<https://doi.org/10.30574/msarr.2023.8.2.0102>
- Omorogiuwa, T. B. E. & Azorodu, A. A. (2024). Resilience in the face of family dysfunction: Coping mechanisms among children in Ikenne Local Government Area, Ogun State. *African Journal of Social and Behavioural Sciences*, 14(5), 1954–1967.
- Omorogiuwa, T. B. E. (2017). The impacts of mental disability: Implications for social work practice. *African Journal of Social Work*, 7(1), 1–8.
- Omorogiuwa, T. B. E. (2019). A handbook on physical and mental disabilities (2nd ed.). *Mase-Perfect Printing Press*.
- Opoku, F., Opoku, D., Ayisi-Boateng, N., Osarfo, J., Sulemana, A., Agyemang, S., & Agyei-Baffour, P. (2024). Occupational injury prevalence and predictors among small-scale sawmill workers in the Sokoban Wood Village, Kumasi, Ghana. *PLOS ONE*, 19(4), e0298954.  
<https://doi.org/10.1371/journal.pone.0298954>
- Stanley, H., & Inuope, O. (2021). Assessment of air pollution and health hazard associated with selected sawmills in Port Harcourt Metropolis. *South Asian Journal of Research in Microbiology*, 17–34.  
<https://doi.org/10.9734/sajrm/2021/v9i430215>