

## **Assessment of Occupational Injuries and Safety Practices among Automobile Repair Artisans in Apo and Gudu Area of Abuja, Nigeria**

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### **Abstract**

**Background:** Globally, the protection of workers against occupation associated hazards and morbidities have been a momentous public health issue. This paper assessed the occupational injuries and safety practices among automobile repair artisans in Abuja, Nigeria.

**Methods:** This was a cross-sectional descriptive survey involving 400 automobile repair artisans working at the mechanic village of Apo and Gudu area of Abuja, Nigeria. A pre-tested structured, self-administered questionnaire was used to assess respondents' knowledge, attitude and practice on occupational injuries and safety. Data was analysed using IBM SPSS version 23 and Chi-square was employed to test associations between categorical variables. A p value <0.05 was considered statistically significant.

**Results:** The mean respondents' age was 31.2 ± 1.6 years. A large proportion, 314 (78.5%) of the respondents had sustained various forms of occupational injuries. The survey revealed that 228 (57.0%) respondents had a good erudition of occupational injuries and majority 320 (80.0%) of the respondents displayed positive attitude towards safety measures. However, only 128 (32.0%) respondents complied with safety practices. Bivariate analysis revealed that there was a statistically significant relationship between respondents' socio-demographic variables (marital status, ethnicity, and age group) and self-reported previous occurrence of injury at workplace.

**Conclusion:** Although respondents had good knowledge of occupational injuries and positive attitude towards safety measures, they displayed poor compliance towards safety rules and practices. Hence, routine health education on occupation-related hazards and safety should be put in place for the automobile repair artisans.

**Keywords:** Automobile repair artisans; Occupational injuries; Safety practices; Workers health; Nigeria.

## **Introduction**

Over the years, the protection of workers against workplace-associated hazards and morbidities has been of momentous interest to labourers, employers, governments, and the populace at large across the globe. This is ascribed to the fact that a healthy working ambience does not only enhance the cognizance, physical, emotional and psychological well-being of workers, but simultaneously also reduces financial implications related to work disruption, medical costs, loss of expertise, remuneration, and other consequences arising from workplace accident.<sup>1,2</sup> There is an increasing trajectory in the number of occupational accidents and diseases or ailments in the third world countries. It has been expressed that more than 200,000 mortalities occur annually out of the over 120 million casualties that take place in occupational setting in developing nations.<sup>3</sup>

Researches have reported that workers in small and medium scale businesses such as automobile repair artisans are more predisposed to occupation-linked perils and threats.<sup>4</sup> This is partially ascribed to incopious funds, poor technical know-how, lack of workplace safety and adherence to Occupational Safety and Health (OSH) policies and services.<sup>5</sup> Automobile repair artisans work in parking lot or garages where they are vulnerable to various occupational hazards and may be wounded by malfunctioning equipment or mechanical errors.<sup>6-8</sup> Moreover, since their job specifications demands lifting and handling of heavy automobile parts and working in inept positions, this often result in some health challenges vis musculoskeletal disorders, bruise, hernia or limbs injuries<sup>6-9</sup>

As with most third world countries, Nigeria places less value on OSH

incidents.<sup>10</sup> Consequently, some of the automobile repair artisans are oblivious of the upshot of the work ambience and the kind of materials utilised in their job and its connotation to their wholesomeness. Moreover, there is dearth of information regarding the knowledge, attitude and safety practice of automobile repair artisans towards workplace hazards in Nigeria. Therefore, this study was designed to assess the knowledge of respondents on workplace injuries, and also their attitude, compliance and factors influencing their safety practices. It is envisaged that findings from this study will aid in the design of interventions by the various concerned stakeholders, thus promoting and strengthening a salubrious and safe working ambience for the automobile repairs artisans.

## **Methodology**

### **Study design**

This study adopted a descriptive cross-sectional survey to assess occupational injuries and safety practice among automobile repair artisans in Apo and Gudu Mechanic Village in Federal Capital Territory (FCT), Abuja.

### **Study area and study population**

The study was conducted in the mechanic village of Apo and Gudu area of Abuja. Abuja is the capital city of Nigeria and is situated at the middle of the country within the Federal Capital Territory (FCT). It was conceived in the 1980s to substitute the nation's most populous city of Lagos as the capital and became operational in 1991.<sup>11,12</sup> The current metropolitan area of Abuja has an estimated population of 3,652,000 persons at 2022, a 5.43% increase from 2021, assuming the 4<sup>th</sup> most metro area in Nigeria.<sup>12,13</sup> According to the Nigeria Bureau of Statistic,<sup>14</sup> the total number of registered vehicles owners in Nigeria were 11.8 million, of which 25,412 are

domiciled in Abuja. In the FCT, Abuja, where there is strict enforcement of land use act, areas outside the city core are designated for the operation of auto-repair works.

The Apo and Gudu mechanic village are both located in the Abuja municipal council area, located in the centre of FCT. These two mechanic villages are famous and accommodate all types of auto-repair works, hence informing the choice of selection of the study sites. There are over thirty (30) registered automobile repairs workshops in Abuja with an estimated population of 10,220 artisans.<sup>15</sup> The study population consisted of all the artisans in the Apo and Gudu mechanic village. All those who consented were recruited into the study while those who were absent despite several visits were excluded from the study.

**Sample size determination and sampling technique**

The minimum sample size was calculated using Fisher's formula for estimating single proportion.

$n = Z^2(pq)/d^2$  according to Fisher's formula<sup>16</sup>

Where n = minimum required sample size in population greater than 10,000

Z = Standard normal deviate which corresponds to 95% confidence level, (Z = 1.96)

d = level of precision = 5 % (d = 0.05)

p = proportion of automobile artisans who use various types Personal Protective

Equipment in a study reported by Elenwo<sup>10</sup> on "occupational hazards and risks of automobile artisans in Port Harcourt Metropolis, Rivers State, Nigeria".

=59.7% = 0.597

q = 1 - p = 1 - 0.597 = 0.403

$n = \frac{(1.96)^2 \times 0.597 \times 0.403}{0.05^2}$

n = 369.70 = 370

Adjusting for 10% non-respondent rate, hence 370 + 37 = 407

Thus, the minimum sample size required for the survey was 407.

Proportional sampling technique was adopted in the determination of the number of subjects for the study from the subpopulations (Apo and Gudu mechanic village) while random sampling was employed in the selection of participants from each subpopulations. The proportion of artisans in Apo (220) to Gudu (410) is 1:2. Hence, the number of respondents recruited from each stratum is calculated below:

Number of respondents selected from Apo mechanic village =  $1/3 \times 407 = 210 = 136$  participants

Number of respondents selected from Gudu mechanic village =  $2/3 \times 407 = 172.5 = 271$  participants

Hence 136 + 271 = 407 participants. However only 400 participants were recruited for the study.

**Instrument for data collection**

Data collection was done through a pre-tested structured, self-administered questionnaire developed by the authors from literature. The questionnaire was categorized into five sections namely: Section A: demographic information of respondents. Section B: general working conditions and occupational history of the respondents. Section C: respondents' knowledge level on occupational injuries and protective measures. Knowledge on occupational injuries and protective measures was scored based on six (6) items with each correct answer attracting 2 marks. The total marks was 12, the mean score was 6. Less than 6marks was an indication of poor knowledge while 6marks and above was an indication of good knowledge. Section D: respondent's attitude and compliance with safety rules and practices. The compliance scores was

based on 8 items with correct answers attracting 2 marks and overall mark was 16, mean score was 8 marks. Lesser than this was indicated as poor compliance while equal to or greater than 8 marks was indicated as good compliance. Section E: factors influencing safety practices among respondents.

#### **Validity and reliability of the instrument**

To test for reliability, the test-retest method was used. This method involved the administration of the same instrument to the same participants under similar premise on different instances. Scores from repeated testing were compared. The questionnaire was given to 10% of the sample size i.e. 40 artisans at the Bwari mechanical village located at Bwari LGA, a prominent urban district in FCT, who have similar characteristics with the intended study participants on two different occasions with a time space of two weeks. The pre-testing was used to determine if the questionnaire is consistent. The reliability coefficient was calculated to test for the internal consistencies of response and to determine if the instrument is reliable for the study. The reliability coefficient for the pre-test was 0.86, which was an indication of the reliability of the questionnaire.

#### **Data collection procedure**

The data was collected over a period of twelve (12) weeks, and it was done through face-to-face interview.

#### **Data management and analysis**

After data collection, the questionnaires were properly checked for completeness. The collected data was entered manually and analysed using IBM Statistical Product and Service Solutions version 23. Analysed data were summarized and presented in the form of frequency tables, percentages, charts and descriptive

statistics (mean and standard deviation). Inferential statistics such as Chi-square ( $\chi^2$ ) was employed for bivariate analysis of data collected. Statistical significance was placed at one-tailed,  $p < 0.05$  for all inferential analysis.

#### **Ethical considerations**

The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved and ethical clearance was obtained from the Research Ethics Committee of the Ladoke Akintola University of Technology (LAUTECH) in July, 2021. Permission to conduct the study was gotten from the Federal Ministry of Health, Abuja. Also, informed verbal consent was obtained from all consenting participants after elucidation of the research before recruited into the study. Those that consented were interviewed after signing or thumb-printing (for illiterate participants). The right to privacy and anonymity of the participants in the study were strictly adhered to by the researchers and respondents were assured that information provided would be used for research only.

#### **Results**

A total of 400 questionnaires were administered, all of which were completed, returned and subsequently analysed giving a response rate of 100%.

#### **Socio-demographic characteristics of respondents**

The mean respondents' age was  $31.2 \pm 1.6$  years with majority falling within the age group of 27-36 years. 216(54.0%) of the respondents were married and 235(58.7%) were Christians. 219 (54.8%) of the respondents had secondary education while 38(9.5%) had tertiary education. The ethnic distributions were Yoruba; 138(34.5%), Igbo; 137(34.3%), and Hausa; 125(31.3%) Table 1.

### **General working conditions and occupational history**

Three hundred and two (75.5%) of the artisans were mechanic with 2(0.5%) being vulcanizer. Three hundred and one (75.2%) respondents had more than 5 years working experience and 307(76.8%) of them worked more than 5 days in a week. One hundred and eighty-eight (47.0%) of the respondents enter into apprenticeship between age 18 - 25years. Three hundred and fourteen (78.5%) of the participants had sustained one form of occupational injury or the other Table 1.

### **Knowledge of Occupational Injuries and Safety Practices among Respondents**

From Table 2, 299(74.8%) of the respondents had heard about occupational injuries and 132(44.1%) claimed that their source of information was from seminar/workshop. Some of the common occupational injuries reported by the respondents were: dislocation; 64(16.0%), cartilage fracture or tear; 59(14.7%), and abrasion, bruise or contusion; 51(12.8%). The respondents reported the following as common circumstances leading to injuries: pulling heavy weight objects 130(32.5%), and lifting heavy weight objects 101(25.2%). Two hundred and nineteen (54.8%) of the respondents reported using various types of Personal Protective Equipment (PPE) to mitigate occupational injuries. From Figure 1, 228(57.0%) the respondents had a good knowledge of occupational safety practices while about 172(43.0%) had poor knowledge.

### **Compliance of respondents toward Safety Rules and Practices**

Two hundred and fifty-six (64.0%) of the respondents had heard about safety rules in workplace with majority 190(74.2%) of the respondents reporting concentration at workplace as a vital occupational safety

rules. However, 151(59.0%) of the respondents never adheres to these workplace safety rules but 9(3.5%) did Table 3. One hundred and twenty-eight (32.0%) of the respondents shown good compliance towards safety practice Figure 2.

### **Usage of safety measures and factors influencing level of safety practices among respondents**

From Table 4, only 19(4.8%) of the respondents used safety measures. Some of the reasons given by the respondents for not adhering to safety measures were: non-availability; 186(48.8%), inconvenience; 125(32.8%), insufficient time; 37(9.7%), forgetfulness; 31(8.2%), and expensive; 2(0.5%). Less than half; 176(44.0%) of the respondents had previous training on safety practices and with 173(86.9%) of them having the training 1 to 3 years preceding the study.

### **Attitude of Respondents towards Safety Measures**

Table 5 showed the attitude of respondents towards safety measures. Majority of the respondents agreed on the following: routine hand washing after work done, 350(87.5%); PPE must be worn while working 343(85.8%); alcohol intake increases risk of occupational injuries 345(86.2%); full concentration prevents occupational injuries 353(88.3%); and workshop should be located in a good environment 351(87.8%).

### **Relationship between socio-demographic characteristics of respondents and self-reported previous occurrence of injury at workplace**

As shown in table 6, there were statistical association between the following socio-demographic variables (marital status, ethnicity, and age group) and self-reported injury at workplace.

**Tables and figures**

**Table 1: Socio-demographic characteristics and occupational history of respondents**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age group (year)</b>		
10-19	11	2.8
20-29	96	24.0
30-39	248	62.0
Above 39	45	11.2
Total	400	100.0
<b>Marital Status</b>		
Single	153	38.2
Married	216	54.0
Divorced/Separated	16	4.0
Widowed	15	3.8
Total	400	100.0
<b>Religion</b>		
Christian	235	58.7
Muslim	150	37.5
Traditionalist	15	3.8
Total	400	100.0
<b>Level of Education</b>		
None	73	18.2
Primary	70	17.5
Secondary	219	54.8
Tertiary	38	9.5
Total	400	100.0
<b>Ethnicity</b>		
Yoruba	138	34.5
Igbo	137	34.3
Hausa	125	31.2
Total	400	100.0
<b>Nature of work</b>		
Mechanic	302	75.5
Panel beater	52	13.0
Auto painter	31	7.8
Rewire/Technician	10	2.5
Vulcanizer	2	0.5
Welder	3	0.7
Total	400	100
<b>Years of working experience</b>		
Less than 5 years	99	24.8
More than 5 years	301	75.2
Total	400	100.0
<b>Working days in a week</b>		
Less than 5 days	93	23.2
More than 5 days	307	76.8
Total	400	100.0
<b>Age at first practice</b>		
Below 18 years	172	43.0
18-25 years	188	47.0
25-30 years	37	9.3
31years – above	3	0.7
Total	400	100.0

**Ever sustained occupational injury before**

Yes	314	78.5
No	86	21.5
Total	400	100.0

**Part of body affected**

Head	94	29.9
Upper limb	38	12.1
Thorax	53	16.9
Abdomen	18	5.7
Lower limb	111	12.4
Total	314	100.0

**Table 2: Knowledge of occupational injuries among respondents**

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Have you heard about occupational injuries</b>		
Yes	299	74.8
No	101	25.2
Total	400	100.0
<b>Source of information</b>		
Seminars/Workshop	132	44.1
Media	69	23.1
Colleagues	80	26.8
Hospital	8	2.7
Magazine	10	3.3
Total	299	100.0
<b>Common injuries in workplace</b>		
Traumatic Injury	36	9.0
Injury to nerve(Pinched nerve)	34	8.5
Dislocation	64	16.0
Cartilage fracture or Tear	59	14.7
Sprain	34	8.5
Torn ligament	21	5.2
Deep laceration	20	5.0
Puncture wound	42	10.5
Abrasion, bruise or contusion	51	12.8
Burn/chemical blister	25	6.3
Fracture	14	3.5
Total	400	100.0
<b>Common causes on injuries</b>		
Pulling heavy weight object	130	32.5
Lifting heavy weight object	101	25.2
Pushing heavy weight objects	37	9.3
Holding Heavy weight objects	68	17.0
Carrying heavy weight object	58	14.5
Loosing car body parts	4	1.0
Tighten car parts	2	0.5
Total	400	100.0
<b>Disease that could occur due to untreated injuries</b>		
Tetanus infection	296	74.0
Skin diseases	89	22.2
Eye diseases	8	2.0
Respiratory Diseases	7	1.8
Total	400	100.0

**Safety measures that can reduce injuries**

Use of Personal Protective Equipments (PPEs) e.g hand gloves, ear muff, safety boots and clothes	219	54.8
Original tools to work	69	17.3
Good equipment maintenance	15	3.8
Proper use of equipment	81	20.2
Removal of harmful objects	5	1.2
Ensuring gas cylinder is not leaking	3	0.7
Being careful with chemicals	8	2.0
Total	400	100.0

**Table 3: Respondents compliance with safety rules and practices**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Heard of occupational safety rules in the workplace?</b>		
Yes	256	64.0
No	144	36.0
Total	400	100.0
<b>Safety rules known</b>		
Concentrate at work	190	74.2
Don't drink or smoke while on duty	19	7.4
Good environment	11	4.3
Not putting on metals while working	6	2.3
Use of PPEs such as goggle/safety wears /safety boots while working	27	10.6
Investigation	3	1.2
Total	256	100.0
<b>Frequency of safety rules kept</b>		
Never	151	59.0
Rarely	61	23.8
Occasionally	21	8.2
Often	14	5.5
Always	9	3.5
Total	256	100.0



**Table 4: Usage of safety measures and factors influencing level of safety practices among respondents**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Usage of safety measures</b>		
Yes	19	4.8
No	381	95.2
Total	400	100.0
<b>Reason for not using safety measures.</b>		
Not Available	186	48.8
Forgetfulness	31	8.2
Not Convenient	125	32.8
Insufficient time	37	9.7
Expensive	2	0.5
Total	381	100.0
<b>Trained previously on safety practices</b>		
Yes	176	44.0
No	224	56.0
Total	400	100.0
<b>Previous training</b>		
< 1 – 3 years	153	86.9
4- 6 years	16	9.1
Above 6 years	7	4.0
Total	176	100.0

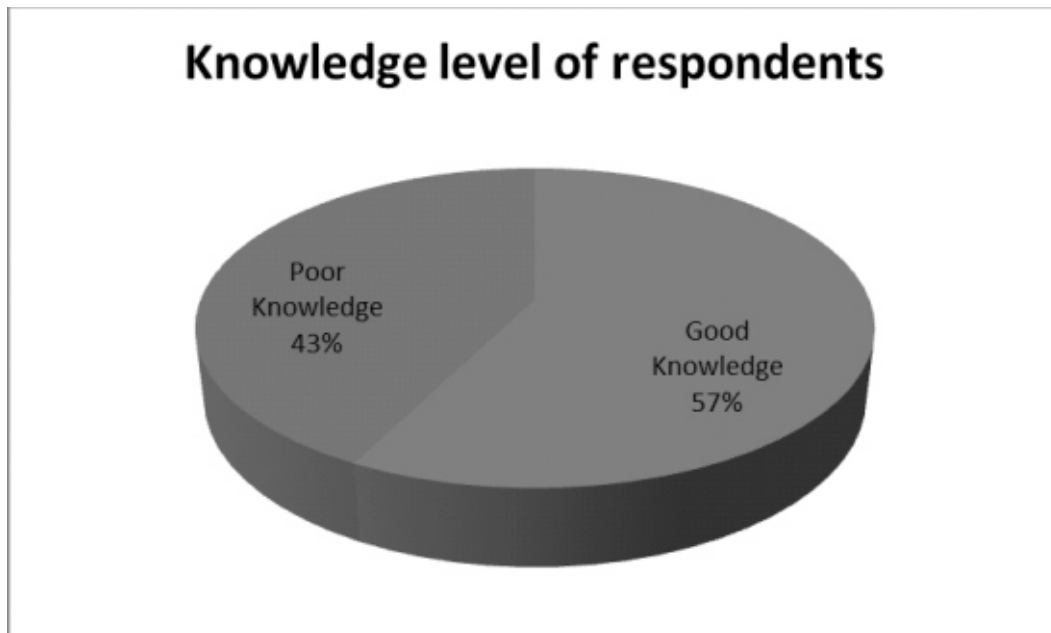
**Table 5: Attitude towards safety measures**

<b>Variables</b>	<b>Agree (%)</b>	<b>Disagree (%)</b>	<b>Not Sure (%)</b>	<b>Total</b>
Necessary to routinely wash hand after work done	350(87.5)	35(8.8)	15(3.7)	400
Hands free of jewelry should be encouraged during work	329(82.2)	39(9.8)	32(8.0)	400
PPE must be worn while working	343(85.8)	21(5.2)	36(9.0)	400
Non-smoking impose on artisans	328(82.0)	29(7.2)	43(10.8)	400
Alcohol intake increases risk of occupational injuries	345(86.2)	23(5.8)	32(8.0)	400
Full concentration prevents occupational injuries	353(88.3)	17(4.2)	30(7.5)	400
Use of unprescribed drug is a risk factor of having occupational injuries	321(80.2)	23(5.8)	56(14.0)	400
Workshop should be located in a good environment	351(87.8)	29(7.2)	20(5.0)	400

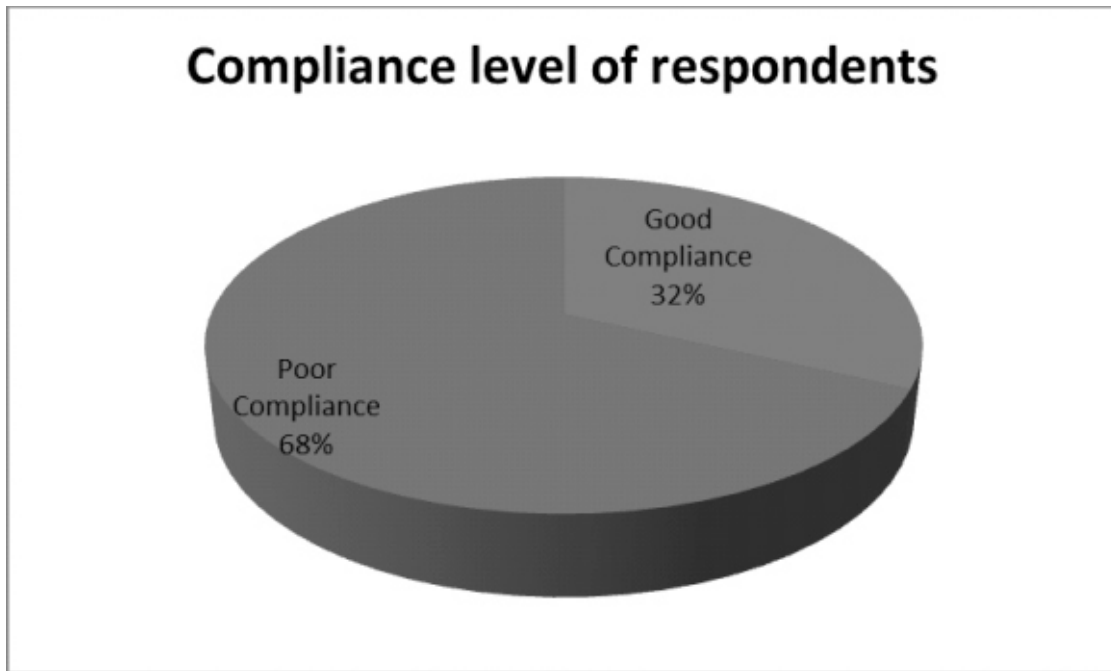
**Table 6: Association between socio-demographic characteristics and previous occurrence of injury at workplace**

Variable	Yes (%)	No (%)	Df	$\chi^2$	p value
<b>Marital Status</b>					
Single	108(34.4)	45(52.3)	3	12.0	0.007
Married	178(56.7)	38(44.2)			
Divorced/Separated	16(5.1)	0(0.0)			
Widowed	12(3.8)	3(3.5)			
<b>Ethnicity</b>					
Yoruba	110(35.0)	28(32.6)	2	8.1	0.018
Igbo	116(36.9)	21(24.4)			
Hausa	88(28.1)	37(43.0)			
<b>Religion</b>					
Christian	192(61.2)	43(50.0)	2	3.8	0.140
Islamic	110(35.0)	40(46.5)			
Traditionist	12(3.8)	3(3.5)			
<b>Level of Education</b>					
Primary and below	104(33.1)	39(45.3)	4	6.8	0.150
Secondary Education	181(57.7)	38(44.2)			
Tertiary Education	29(9.2)	9(10.5)			
<b>Age group (year)</b>					
10 – 19	7(2.2)	4(4.6)	2	24.3	0.001
20 - 29	71(22.6)	25(29.1)			
30 - 39	204(65.0)	44(51.2)			
Above 39	32(10.2)	13(15.1)			

**Figures**



**Figure 1: Overall Categorized Knowledge on Safety Practices among Respondents**



**Figure 2: Categorized Compliance with Safety Practices among Respondents**

#### Discussion

Occupational hazard is not only inimical to the salubrity of the workers but also reduces drastically the work efficiency. It also has great impact on the psychosocial and economic wholesomeness of the workers, their dependents, and families.<sup>17</sup> Automobiles repair in Nigeria is principally a masculine occupation. The lack of females among the respondents corroborate the fact that females seldomly participate in vehicle repairs. This report is in consonance with the findings from Ghana<sup>18</sup> and Nigeria.<sup>19</sup> The mean age of the participants was  $31.2 \pm 1.6$  years with majority falling within the age group of 20-39 years and were married. This implies that automobile repairs artisans are mostly young adults due to the arduous venture and hazard linked with the job. Automobile repairs artisans are usually individuals from poor socio-economic backgrounds and this is affirmed by the high proportion of respondents having only primary or

secondary education in the study. This finding is similar to the report from other author<sup>10</sup>.

On the general working conditions and occupational history, most of the respondents interviewed were mechanics. A significant proportion of the respondents had more than 5 years working experience and worked more than 5 days (40 hours) in a week. This finding is consistent with those of other authors in Nigeria<sup>20,21,10</sup> respectively. These findings imply that there is an abysmal execution of the International Labor Organization and Occupational Safety and Health Administration Act at the workplace in Nigeria. This also illuminates the abject poverty in the country, which compel most of the artisans to work beyond 40 hours per week and prevents them from forming a fair equilibrium between work and family life. Most of the respondents reported sustaining one form of injury or the other

on different parts of their body. This may be attributed to the longer duration they spent in the workplace environment thus exposing them to greater risks of injuries. In this survey, majority of the participants had heard about occupational injuries before and a large proportion claimed seminar/workshop to be their source of information. This agrees with the findings of other authors in Sokoto, Northern Nigeria, in Nepal and in India.<sup>20,22-24</sup> The commonest injuries/complications reported to occur in workplace were ergonomic: dislocation, cartilage fracture, puncture wound, sprain, torn ligament and fracture, while the others were non-ergonomic hazards. This finding is also in consonance with another report.<sup>25</sup> The common causes of injuries were ascribed to pulling and lifting of heavy weight objects. This assertion is in tune with the reports of other researchers who both reported that automobile repairs artisans rarely use mechanical aids to assist in lift heavy objects.<sup>6,10</sup> All the respondents had knowledge that one act of safety measures or the other can be used to mitigate injuries in workplace. This study reveals that majority of the respondents had an overall good knowledge of safety practices in workplace. This finding also agrees with those of other authors.<sup>20,21,26</sup> In spite of the overall good knowledge of the respondents on safety practices, majority of them exhibited poor compliance while a few rarely or often keep to these rules. In fact only a few among the respondents always used safety measures at work. It is apparent that there is a gulf between knowledge of safety measures and usage of safety devices as evident in this study, where most of the respondents had good knowledge of safety practices but very few always used the safety measures while at work. This observation is consistent with those of several authors.<sup>6,7,27</sup> A large proportion of the respondents reported

non-availability of safety measures and inconvenience in its usage as reasons for not using safety measures in workplace. In addition, more than half of the respondents had no prior training on the use of PPE. The lack of safety measures in workplace potent ill and danger to lives and well-being of the workers, as PPE serves as a physical barrier to occupational hazards. Studies in Nigeria, Tanzania and Saudi Arabia also reported non-availability and low use of PPEs by auto-mechanics.<sup>6,25,28</sup>

It is important to note that a significant proportion of the respondents show positive attitude toward workplace hazards. It has been enunciated by psychological research that an individuals' attitude towards self-obligation for safety is intimately associated with their probability of being inflicted with occupational hazard or ailments.<sup>29</sup> Consequently, the good attitude exhibited by the participants implies that they are less vulnerable to occupational mishap or maladies. Some of the determinants influencing the level of safety practices among the respondents were inadequate time, inconvenience, work exertion, oblivion etc. This is in consonance with those limiting factors to safety practices among automobile repairs artisans enunciated by several researchers.<sup>8,27,30</sup> Bivariate analysis revealed the following socio-demographic variables (marital status, ethnicity, and age group) of respondents to have significant relationship with self-reported previous occurrence of injury at workplace. It has been affirmed that as one ages in the job the number of workplace hazards one is exposed to increases significantly. This preposition is also corroborated by research reports.<sup>29,31</sup> Likewise, the outcome of this study negates other reports where educational status is directly related to the level of comprehension of workplace risks

avoidance.<sup>32</sup> This finding is however, in consonance with past descriptive studies in which socio-demographic characteristics were found to be significantly associated with self-reported workplace injuries.<sup>29,33</sup>

Our study provides the ground picture of the knowledge, compliance and attitude of automobile repair artisans towards occupational injuries and safety practices in a typical cosmopolitan area of Abuja, Nigeria which is hitherto unreported. Findings from this study further emphasize the importance of occupational safety to the well-being and productivity of the workers, which in turn affect the public health of the general populace who largely depends on the economic outputs of the workers. This study has revealed that erudition of workplace hazards thus not always translate to adherence to safety practices. Hence, it suggests that further research should look at how socio-cultural beliefs influence the application of knowledge of the use of PPEs among automobile artisans.

In spite of the 100% response rate and the importance of safety awareness among automobile repairs artisans, there were vital limitations to this survey. Firstly, some of the study participants display apathy towards the study due to socio-cultural reasons. Secondly, the study was limited to only Apo and Gudu Mechanic Villages in Federal Capital Territory (FCT), Abuja, consequently findings may not be generalisable to all automobile repairs artisans in FCT or the country at large. Lastly, this study was solely quantitative with no avenue for participants to write their comments or express their views outside the questions asked.

### **Conclusion**

The most common occupational injuries reported in workplace by the respondents

was ergonomic with few been non-ergonomic hazards. This study reported good knowledge and positive attitude of the automobile repairs artisans towards safety measures. However, their erudition did not translate to good practices, since majority of them display poor compliance generally towards safety rules and practices, leading to self-reported work-related injuries and diseases. The study also reveals that the main socio-demographic predictors of self-reported previous occurrence of injuries at workplace were marital status, ethnicity, and age group.

Hence, this study recommends the need for Governments through the Ministries of Labour & Productivity, and Health to collaborate with the leadership of Automobile Mechanics' Association to organize routine health education to create awareness on occupation-related hazards and safety among the artisans with the objective of enhancing the salubrity of the workers. Also, it is germane that automobile repairs artisans need to be provided with and indoctrinated on how to use personal protective equipment while working; and also to abide with occupational health and safety rules. The coverage of the training shall include proper handling of all equipment, use of mechanical aids to help in lifting heavy loads, and utilization of respirator etc. Finally, a comprehensive survey in other workshops across the country is consequential to obtain a holistic picture nationwide for the necessary policy considerations.

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### Conflicts of interest

The authors declare that they have no competing interest.

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