Original Article

Awareness and utilization of emergency response service to road traffic crashes in Nigeria: a cross-sectional study

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Background: Road traffic crashes pose a significant risk to public safety and health, leading to around 1.3 million fatalities and causing disabilities annually. Yet, there is a paucity of data on emergency response in Nigeria. This study aimed at assessing the awareness and utilization of emergency response service to road traffic crashes among the Nigerian populace.

Methods: This descriptive web-based cross-sectional study was conducted among the Nigerian general public between July 2022 to March 2023. Convenience sampling was used for this study to select respondents who have access to the internet and are above the age of 18 years. The Cochran formula was used for the sample size calculation. An adapted, self-administered questionnaire which comprised questions on awareness of road traffic crashes, utilizations of emergency response service, etc. was scripted into Google Form and used for data collection via electronic and social media platforms (Facebook, WhatsApp, and Emails). Univariate, bivariate, and multivariate analyses were done using Stata version 17.0.

Results: More than half of the 445 respondents, 239 (53.7%) are young adults between the ages of 25–35 years. Regarding awareness, 183 (41.1%) were aware of medical emergency response services while only 70 (21.9%) have used emergency response services. Gender and education are statistically significant with awareness of emergency response, i.e., more of those who are females and those who have lower education (primary and secondary education) were less likely aware of emergency response services [P=0.025, odd ratio (OR) =0.626], 95% confidence interval (CI): (0.416–0.942) and (P=0.035, OR =0.377, 95% CI: 0.152–0.935) respectively. Major reasons for not utilizing emergency response services include lack of awareness about their existence 106 (42.6%), followed by those who do not have the contact details of emergency response services 53 (21.3%), delay in response by the service provider 35 (14.1%).

Conclusions: Low awareness and subsequent lack of contact information contribute to the underutilization of emergency response services. Addressing this requires regular awareness programs by governments and agencies. These initiatives should improve service quality, foster positive financial and behavioral attitudes, and enhance overall preparedness.

Keywords: Awareness; utilization; emergency response service; road traffic crash

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Introduction

Globally, road traffic crashes are a major threat to public safety and health. According to the World Health Organization (WHO) in 2018, road traffic crash claims over 1.3 million lives each year (1), causing disabilities and injuries in about 50 million people across all age groups and genders per year (2-5). Furthermore, road traffic crashes are the leading cause of death of people between the ages of 5–29 years old and the eighth leading cause of death across all age groups (1,6-8). It is predicted that by 2030, road traffic crashes will become the seventh leading cause of death globally (9).

The overall global road traffic fatality rate is 18 per 100,000 population (10), and according to the WHO, road traffic injuries are three times higher in middle-income countries (1,11). While the yearly number of road deaths in Africa, alongside other underlying challenges, is the highest in the world (27 per 100,000 people) (1,12), it is noteworthy that estimates of the magnitude of road traffic injuries in low-income countries are grossly under-reported due to poor data management systems (2,4,13). Nigeria has been consistently ranked as one of the countries in Africa with the highest incidence of road traffic crashes (5,14). According to a study published in 2017, in Nigeria, an average of 17 road traffic crashes are recorded daily, further exacerbating the already elevated rates of morbidity and mortality from various causes (15). Additionally, road traffic crashes cause considerable societal well-being and socioeconomic economic losses especially in developing countries as a result of morbidity, mortality, and property-related costs (6).

Over the years, emergency response service has been established as a vital service to reducing and recusing crash victims in Nigeria (16). The first emergency medical service (EMS) system began in the early 2000s in Nigeria (17). However, there has been a huge gap in the consistency in the operation of the service and nationwide policy (18). Additionally, research has shown persistent poor management of road traffic crash victims due to poor attention to emergency response in Nigeria (19). This is evident by the lack of knowledge of triage measures and first aid guidelines for victims of road traffic crashes at the scene which often leads to poor prehospital response (16). In the same vein, there is variability in research conducted on the response duration of emergency services in different parts of the country. A study conducted in Niger Delta showed an ideal response time of about 10–30 minutes after a crash had occurred and paramedics effectively transported patients in ambulances to appropriate referral hospitals for definitive treatment (20). Another study conducted in 6 states (Kwara, Kogi, Oyo, Osun, Ekiti, and Niger States) in Nigeria showed that the majority of victims arrive at the hospitals late (mostly within 1 hour of injury) (21). Furthermore, there is limited knowledge of the preparedness for emergency response of the public and the utilization of the emergency response system in Nigeria. Therefore, this study aimed to assess the awareness and utilization of emergency response services to road traffic crashes among the Nigerian populace. Findings from this study form a baseline upon which policies and interventions can be implemented to improve the emergency response to the number of road traffic injuries in Nigeria and also for future referencing. We presented this article in accordance with the STROBE reporting checklist (available at https://jphe.amegroups.com/article/view/10.21037/jphe-23-31/rc).

Highlight box

Key findings

- Less than one-quarter of those who had experienced road traffic crash used the emergency response service. Males and those with higher education had higher awareness of emergency response service.

What is known and what is new?

- Road traffic crashes have been a longstanding problem in Nigeria, contributing significantly to mortality and morbidity, and responsive emergency services has been identified as a vital component in reducing deaths from road traffic crashes.
- The utilization rate of emergency response services in our study was low due to lack of awareness of emergency response services and by extension, lack of contact information and delay in response time.

What is the implication, and what should change now?

- There is a need for government and agencies to conduct routine awareness programs towards increasing awareness of the public on emergency response services and strengthen the quality of services being provided by the emergency response bodies/agencies.

Methods

Study location

This study was conducted in Nigeria between July 2022 to March 2023.

Study design

The study was a descriptive web-based cross-sectional study.

Study population

The study population of this research was residents in Nigeria who were above 18 years of age.

Sample size estimation and sampling technique

Based on Cochran's formula for the calculation of sample size for single proportions,

$$Sample\ size = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1+\left(\frac{z^2 \times p(1-p)}{e^2 N}\right)} \quad [1]$$

Where:

z is the standard normal deviate at a 95% confidence interval (CI) which is 1.96;

$1 - p$ is the complementary probability;

e is for precision allowing an error of 5%;

p is the proportion from a previous study relative to the objectives of our study; 35.3% (14);

N is the population size.

The calculated minimum sample size was 386 with 10% for attrition and cross-tabulation. Convenience sampling (a non-probability sampling technique) was used for this study to allow easy access to the population (those who are above 18 years and have access to the internet) to be part of the sample.

Instrument and data collection process

A self-administered questionnaire was adapted from previous studies (2,22). The questionnaire comprises four sections: A, B, C, and D: section A is on the demographics of the respondents, section B focused on awareness of emergency response services, section C focused on utilization of emergency response services, and section D focused on the experience of road traffic crash response. The research instrument was designed in English language. A total of 20 respondents pre-tested the questionnaire to address the validity and any form of ambiguity in the questionnaire. The pilot exercise was restricted to those within close networks, i.e., friends and families of the authors and cut across different study populations (students, medical professionals, and non-medical professionals among others). The questionnaire was set up via Google Forms and the access link was shared via online platforms including Facebook and WhatsApp, by all authors. Each author shared the link within 10 individual WhatsApp groups and their Facebook stories. Also, in a bid to reach a greater and more diverse audience, authors subscribed to paid advertisements on Facebook and Email for the data collection process. The link to the survey was shared between October 1st, 2022 till January 29th, 2023. The inclusion criteria for respondents include those more than 18 years old, and an understanding of the English language due to the nature of the web-based study.

Statistical analysis

Questionnaires were sorted to check for errors and omissions at the end of the collection of data and appropriate corrections were made. Thereafter, data were extracted from the survey tool into an Excel spreadsheet and exported for analysis using Stata version 17.0. Univariate analysis was done by using frequency tables for bio-data, awareness, and utilization of response services. Bivariate analysis was done via Chi-square to find the association between socio-demographic characteristics and awareness of emergency response services. Multivariate analysis was done through binary logistics regression to identify determinants of awareness of emergency response services.

Ethical considerations

This study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). Ethical clearance was gotten from the Ekiti State Ministry of Health Research Ethics Committee with approval number MOH/EKHREC/EA/P/42 prior to the data collection exercise. Additionally, participants' consent was sought through a pre-filled form and they were assured of strict anonymity as their names or addresses were not collected nor extracted prior to the data collection. Also, they were assured of confidentiality as the data would only be used for research purposes.

Results

Table 1 describes the socio-demographic characteristics of the respondents that participated in the survey. More than half of the 445 respondents, 239 (53.7%) are young adults between the ages of 25–35 years. The female-to-male ratio was nearly 1:1 (female 50.8%, male 49.2%),

Table 1 Socio-demographic characteristics of respondents

Variables	Frequency (n=445)	Percentage (%)
Age group (year)		
Mean ± SD	32±10.31	
Min–Max	18–79	
Youths [18–24]	83	18.7
Young adults [25–35]	239	53.7
Middle aged group [36–64]	114	25.6
Old aged (≥65)	9	2.0
Sex		
Male	219	49.2
Female	226	50.8
Marital status		
Single	287	64.5
Married	147	33.0
Divorced/separated	8	1.8
Widowed	3	0.7
Religion		
Christianity	407	91.5
Islam	35	7.9
Atheist	1	0.2
None	2	0.4
Highest level of education		
Primary education	3	0.7
Secondary education	33	7.4
Tertiary education	409	91.9
Current occupation		
Medical professionals (doctor, nurse, etc.)	93	20.9
Non-medical professional (bankers, lawyers, etc.)	147	33.0
Business man/woman	67	15.1
Artisan (tailor, barber, hairdresser, etc.)	13	2.9
Student	81	18.2
Unemployed	30	6.7
Others	14	3.1
Description of residence		
Urban	300	67.4
Sub-urban	128	28.8
Rural	17	3.8

SD, standard deviation; Min, minimum; Max, maximum.

the majority of whom were single, 287 (64.5%). More than 9 in 10 respondents reported having attained tertiary education. A fifth of the respondents 93 (20.9%) are in the medical profession while the other 79.1% are in non-medical professions, unemployed, or students. A significant percentage 428 (96.2%) of the respondents reside in urban or suburban parts of Nigeria (*Table 1*).

Of all the survey respondents, 183 (41.1%) indicated awareness of medical emergency response services in Nigeria, compared to 262 (58.9%) who were not aware of any services. When asked to specify which service providers they were aware of, over half of respondents mentioned government agencies—State (Sub-national) Emergency Management Agencies 66 (36.1%), National Emergency Management Agency 26 (14.2%), and Security Agencies 14 (7.7%), while 77 (42.1%) of respondents mentioned other private not-for-profit and for-profit stakeholders such as Red Cross and Emergency Response Africa. Among those who responded to being aware of an emergency response service in Nigeria, less than half 91 (49.7%) responded 'Yes' to have the contact details of the service providers, while 92 (50.3%) did not have the contact information. In an effort to assess preparedness to act in an emergency, all survey respondents were asked whether they had received formal medical emergency response training. Only 162 (36.4%) of the respondents indicated that they had received formal training, of which 103 (63.6%) had taken the training less than 2 years ago. When asked about existing payment plans to address medical emergencies, 111 (24.9%) of all respondents confirmed having insurance as their primary payment plan, while 76 (17.1%) and 10 (2.2%) expected to rely on bank savings and group contributions respectively. However, 248 (55.7%) indicated that they had no payment plan for medical emergencies (*Table 2*).

In *Table 3*, 319 (71.7%) of the respondents had either witnessed or been involved in road traffic crashes. Of those who have either been involved in or witnessed a road traffic crash, only 70 (21.9%) used any medical emergency response service. The prominent reasons for not using the emergency response service range from those that are not aware of any emergency response service 106 (42.6%), followed by those who do not have the contact details of the service providers 53 (21.3%), and delay in response by the service providers 35 (14.1%) (*Table 3*).

Table 4 shows the relationship between awareness of emergency response and the socio-demographics of all respondents. Age group, sex, marital status, and the highest level of education were all associated with awareness

Table 2 Awareness of medical emergency response services in Nigeria

Variables	Frequency (n=445)	Percentage (%)
Awareness of any medical emergency response services in Nigeria		
Yes	183	41.1
No	262	58.9
If yes, which medical emergency response services (n=183)		
State Emergency Management	66	36.1
Emergency Response Africa	42	23.0
National Emergency Management Agency	26	14.2
Red Cross	13	7.1
Security Agencies	14	7.7
Others	22	12.0
If you are aware of the emergency response services in Nigeria, do you have their contact/shortcode details (n=183)		
Yes	91	49.7
No	92	50.3
Formal training on medical emergency response		
Yes	162	36.4
No	283	63.6
If you have received formal emergency response training, how long ago was your training? (n=162)		
Less than 2 years ago	103	63.6
More than 2 years ago	59	36.4
Major payment plan for medical emergencies		
I don't have	248	55.7
Insurance	111	24.9
Bank savings	76	17.1
Group contribution	10	2.2

of emergency response as they all showed statistically significant differences. With age group, 5 (55.6%) of old-aged (65 years and above) respondents were aware of emergency response services compared to their counterparts who are youths (18–24 years), young adults (25–35 years) and middle-aged group (36–64 years) (P<0.001). In terms of sex, more males, 105 (46.5%) were aware of emergency response services compared to only 78 (35.6%) of females (P=0.020). Regarding marital status, 84 (57.1%) of those who were married are aware of emergency response services compared to their counterparts who are either single, divorced/separated, or widowed (P<0.001). Concerning the level of education, 174 (42.5%) of those who have tertiary education were aware of emergency response services, compared to their counterparts who have primary or secondary education (P=0.038) (*Table 4*).

In the model for all respondents, females are approximately two times less likely aware of emergency response services than males [P=0.025, odd ratio (OR) =0.626] 95% CI: (0.416–0.942). Likewise, those who have low education (i.e., primary and secondary) are three times less likely aware of emergency response services than those with Tertiary education (P=0.035, OR =0.377, 95% CI: 0.152–0.935) (*Table 5*).

Table 3 Experience and utilization of emergency response services in Nigeria

Variables	Frequency (n=445)	Percentage (%)
Have you been involved in or witnessed a road traffic accident?		
Yes	319	71.7
No	126	28.3
If yes, how long was the accident (n=319)		
Less than 2 years	170	53.3
2–5 years	72	22.6
More than 5 years	77	24.1
Did you or anyone make use of a medical emergency response service? (n=319)		
Yes	70	21.9
No	249	78.1
If no to above, explain why you didn't use the emergency response service? (n=249)		
No awareness of any emergency response service	106	42.6
Don't have their contact	53	21.3
Not readily available/delay in responding	35	14.1
Mild accident	22	8.8
Help of passer-by/nearness to hospital	33	13.3
If you used an emergency response service, how long did they take to arrive at the accident scene? (n=70)		
Less than 30 minutes	18	25.7
30–60 minutes	17	24.3
61–120 minutes	8	11.4
Over 120 minutes	11	15.7
I don't know	16	22.9
How likely are you to recommend the emergency response service to others? (n=70)		
Maybe	10	14.3
More likely	27	38.6
Always	33	47.1

Discussion

Socio-demographic characteristics of respondents

Our study assessed the awareness and utilization of emergency response services among the Nigerian populace. Findings from this study are discussed structurally into socio-demographics, awareness of emergency response services, utilization of emergency response services, and experience using emergency response services as the associated factors related to the awareness among all the respondents. A total of 445 respondents filled out and returned the survey instrument and out of this, more than half of the respondents (53.7%) are young adults between the ages of 25–35 years. This age group represents part of the larger proportion of the national population in Nigeria according to the data released in 2021 (53.73%) (23). Our study shows a nearly similar ratio of female-to-male (50.8% and 49.2%) compared to another study that showed a major disparity between the male and the female distribution (4,16). Furthermore, over one-third of all the respondents are single.

Table 4 Pearson's chi-square showing the relationship between awareness of emergency response and socio-demographics of all respondents

Variables	Sub-variables	Awareness of emergency response services in Nigeria		Remarks
		Yes (%), n=183	No (%), n=262	
Age-group	Youths (18–24 years)	21 (25.3)	62 (74.7)	χ^2=19.087; P<0.001*
	Young adults (25–35 years)	94 (39.3)	145 (60.7)	
	Middle aged group (36–64 years)	63 (55.3)	51 (44.7)	
	Old aged (65 and above)	5 (55.6)	4 (44.4)	
Sex	Male	105 (46.5)	121 (53.5)	χ^2=5.402; P=0.020*
	Female	78 (35.6)	141 (64.4)	
Marital status	Single	94 (32.8)	193 (67.2)	χ^2=24.112#; P<0.001*
	Married	84 (57.1)	63 (42.9)	
	Divorced/separated	4 (50.0)	4 (50.0)	
	Widowed	1 (33.3)	2 (66.7)	
Religion	Christianity	162 (39.8)	245 (60.2)	χ^2=5.049#; P=0.168
	Islam	20 (57.1)	15 (42.9)	
	Atheist	0 (0.0)	1 (100.0)	
	None	1 (50.0)	1 (50.0)	
Highest level of education	Primary education	2 (66.7)	1 (33.3)	χ^2=6.552; P=0.038*
	Secondary education	7 (21.2)	26 (78.8)	
	Tertiary education	174 (42.5)	235 (57.5)	
Current occupation	Medical professionals (doctor, nurse, etc.)	53 (57.0)	40 (43.0)	χ^2=18.102; P=0.060
	Non-medical professional (bankers, lawyers, etc.)	62 (42.2)	85 (57.8)	
	Business man/woman	19 (28.4)	48 (71.6)	
	Artisan (tailor, barber, hairdresser, etc.)	3 (23.1)	10 (76.9)	
	Student	27 (33.3)	54 (66.7)	
	Unemployed	13 (43.3)	17 (56.7)	
	Others	6 (42.9)	8 (57.1)	
Description of residence	Urban	127 (42.3)	173 (57.7)	χ^2=0.608; P=0.738
	Semi-urban	49 (38.3)	79 (61.7)	
	Rural	7 (41.2)	10 (58.8)	

*, statistically significant at P<0.05; #, Likelihood ratio used instead of Pearson's because at least one cell has an unexpected value less than five.

Awareness and preparedness toward medical emergency response

With regards to the awareness of emergency response services among all respondents, about half of the respondents indicated awareness of medical emergency response services in Nigeria. This finding is in tandem with a previous study in India that reported a proportionately high level with over two-thirds of the respondents being aware of emergency response services among respondents (24). In terms of having the contact information required to activate an emergency response, more than half of our respondents did not have the contact information of the

Table 5 Binary logistic regression model for the outcome variable "awareness of emergency response service" and selected potential predictors

Variables	Sub-variables	P value	Odds ratio	95% confidence interval
Age-group	Old aged (reference)	0.724	0.754	0.156–3.631
Sex	Male (reference)	0.025*	0.626	0.416–0.942
Marital status	Widowed (reference)	0.677	1.762	0.123–25.313
Highest level of education	Tertiary education (reference)	0.035*	0.377	0.152–0.935

*, statistically significant P<0.05. Significance level was set at 95%.

response service and this is also similar to a study that showed that about a quarter of their respondents were not aware of the contact information (24). In an effort to assess preparedness to act in an emergency, all survey respondents were asked whether they had received formal medical emergency response training. Just 36% of respondents indicated that they had received formal training, of which 63.6% had taken the training less than 2 years ago. The respondents' financial preparedness for a medical emergency was assessed, only approximately one-quarter of all respondents confirmed having insurance as their primary payment plan, while over half (55.7%) indicated that they had no payment plan for medical emergencies. This figure is less than the one reported by the US Federal Emergency Management Agency in 2020 which showed only (68%) of the population had prepared an emergency plan (25). A plausible explanation for this finding is that more of the respondents from our study pay out-of-pocket for healthcare services and do not have emergency funds.

Experience and utilization of emergency response services

The experienced of road traffic crash were assessed, little below the three-quarter proportion of the respondents had either witnessed or been involved in a road traffic crash (71.1%), a proportion which is more than reports from a previous study which showed almost half of their respondents had experienced road traffic crash (49.7%) (26). Despite the high level of awareness of emergency response services among all respondents, less than one-quarter of those who had experienced road traffic crashes used the emergency response service (21.9%). In terms of the arrival time of the emergency response service, our study revealed a relatively close interval as they arrived in less than 30 min (25.7%). This is in contrast to the results of Kassaw and Asefa [2020], who discovered that it takes between 1 and 2 min of response time in Ethiopia (27) and 3–5 min response time in Nigeria (16), and 25 min (28) average response times reported in Spain. These findings demonstrate that victims have an increased risk of dying before an ambulance arrives especially for individuals who will require cardiopulmonary resuscitation within the first four minutes after the incident at the majority of event locations.

Various factors were cited for not availing emergency response services. Less than half of the respondents mentioned unawareness of the emergency response service, followed by individuals lacking contact information for service providers and those who encountered delays in the response from emergency teams. Delay in response by the emergency response team has been a prominent contributory factor to the underutilization of emergency response services, this was also seen in a qualitative study conducted in Kenya which noted that long-distance travel between limited facilities and the crash scene, lack of after-business-hours ambulance services, and passersby better off evacuated victims, coupled with protocols such as police reports hinders the emergency response by the populace (29). Given that over two-thirds of our respondents who utilized emergency services would readily recommend them to others, this demonstrates the need to be intentional in creating awareness of emergency services in Nigeria.

Association between awareness of emergency response, socio-demographics, and other covariates

Our study found key associations between socio-demographic predictors and the awareness of emergency response among all respondents. Age group, sex, marital status, and the highest level of education were statistically significant with awareness of emergency response on the bivariate analysis. However, further analysis by stratification to test for the association using a binary logistic regression model for the outcome variables showed that only sex and the highest level of education were significant with the awareness of emergency response. Our study further

highlighted that females were two times less likely to be aware of emergency response services compared to males (P=0.025, OR =0.626, 95% CI: 0.416–0.942). This result is in variance with a study conducted in Serbia which showed that females have an in-depth of awareness to emergency response (30). This disparity in findings could be a result of the difference in the study location or can be attributed to the male dominance in most emergency cases in Nigeria compared to Serbia. Our study found those with low education (primary and secondary) three times less likely aware of the emergency response (P=0.035, OR =0.377, 95% CI: 0.152–0.935). Our results showed a similarity with a study in Texas which showed that higher education is associated with awareness of emergency response (31).

The outcomes of our study highlight a significant lack of preparedness for emergencies among a substantial portion of our respondents. Despite awareness levels hovering just below half of the participants, it is clear that this awareness hasn't translated into effective readiness for emergency situations. This is evident from the absence or limited nature of financial safeguards established to mitigate the potential financial burdens associated with emergencies. Additionally, a key discovery from our study is the limited utilization of emergency response services among individuals who have either experienced or witnessed road traffic accidents in Nigeria, despite the fact that awareness levels are relatively high. This trend can be attributed to various factors. One notable factor is the delay in response time, which compromises the efficacy of the emergency response efforts. Furthermore, individuals may lack information on how to reach out to the emergency response services, further hindering their utilization.

In summary, our study underscores that although awareness about emergency response services exists, the gap between awareness and effective preparedness remains a substantial challenge. This is further exemplified by the inadequacy of financial provisions for emergencies and the underutilization of available services, largely due to factors like delayed response times and insufficient knowledge about accessing timely assistance.

Limitations of the study

We found some limitations in our study and one of which is that our study applied an online mode of data collection among all respondents in Nigeria and this made it difficult to specify a target group for the study. Since our study was web-based, more of our study group were between 25–35 age group which may not necessarily represent the general population. Therefore, future web-based studies should consider this limitation when conducting their research. Also, findings from this study only assessed the utilization rate among the general populace who have either been victims or experienced road traffic crashes. It is pertinent for future studies to focus on emergency service workers as well. While our study has given an overview of the awareness and utilization which would form a strong baseline knowledge, it is imperative that a longitudinal follow-up study is conducted using physical data collection and also assess the availability of equipment and barriers to responding to road traffic crashes among emergency response workers.

Conclusions

Based on the results of our study, it is safe to conclude that while more of our respondents are aware of emergency response services in Nigeria, the utilization is still low owing to factors such as having no contact information of the response service as well as the delay in response time. In light of these findings, it is recommended that since road traffic crash is prevalent in Nigeria, government bodies and relevant agencies should implement regular awareness programs aimed at educating the public about emergency response services. Concurrently, efforts should be made to foster positive financial and behavioral attitudes towards preparedness. Furthermore, to address the issues of response time and accessibility, it is recommended that consistent training and monitoring initiatives be established. These efforts should be focused on enhancing the efficiency of emergency services' response times. It is also crucial to ensure that the contact information for these services is widely accessible to the general population.

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Footnote

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Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at https://jphe.amegroups.com/article/view/10.21037/jphe-23-31/coif). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. This study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). Ethical clearance was gotten from the Ekiti State Ministry of Health Research Ethics Committee with approval number MOH/EKHREC/EA/P/42 prior to the data collection exercise. Additionally, participants' consent was sought through a pre-filled form and they were assured of strict anonymity as their names or addresses were not collected nor extracted prior to the data collection. Also, they were assured of confidentiality as the data would only be used for research purposes.

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