Healthcare professionals' awareness of the consequences of medical error on patients

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Abstract

Objectives: To ascertain the awareness level and demographic differences of the consequences of medical errors on patients' health, safety, resources and survival by healthcare professionals..

Methods: The descriptive study was conducted at five different public hospitals in Nigeria from August to October 2017, and comprised healthcare professionals who were permanent staff members. Awareness of medical errors questionnaire was used for data collection. Dimensions assessed were safety, health, resources and survival. A mean score of >2.50 was taken as a cut-off value for acceptable level of awareness. SPSS 20 was used for data analysis..

Results: Of the 200 participants initially enrolled, 186(93%) completed the questionnaire completely. Of them, 98(53%) were females, 92(49%) were aged 30-49 years, 98(53%) were staff nurses, 24(13%) were doctors and 64(34%) were healthcare assistants. Overall mean questionnaire score was 2.60±0.05, indicating that the participants were aware of the consequences of medical error on patients. In terms of individual dimensions, the scores were acceptable for safety, health and resources (>2.50) but the mean score on patients' survival was 2.34±0.08.

Conclusion: There appeared to be a need for the government to raise the awareness level for healthcare professionals regarding consequences of medical errors on patients in public hospitals.

Keywords: Medical errors, Patients, Awareness, Healthcare professionals, Descriptive design. (JPMA 68: 1816; 2018)

Introduction

Medical error in practice is common in every hospital worldwide[1,2] and it ranges from misdiagnosis, wrong decisions and treatment method, abandonment of patients, prescription errors, and medical or surgical complications.[3] Further research shows substantial rates of the errors in hospitals.[4,5] Relevant studies indicate that the frequency of encountering medical errors (making the error or witnessing the error) ranged from 20% to 69%.[6-8] Owing to the steady increase in its occurrence, medical error has deleterious consequences on patients' health, safety, survival and resources. As a result, patients usually suffer increased morbidity, permanent injury or death.[3] Statistically, over 90 per cent of patients' deaths are linked with the increasing rates of medical errors in hospitals.[9] In addition, available report indicates that about 400 people die or are seriously injured each year due to medical errors, while approximately 10,000 people experience serious adverse reactions to drugs as well as high hospital-acquired infection costs.[10] In fact, the current situation gives an impression that the healthcare professionals are not fully aware of the consequences of these occurrences on patients.

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Awareness in this regard could serve as a lead to combating medical errors. However, previous studies have attributed the increasing risks of medical errors in hospitals to variations in training,[11,12] ignorance,[3] specialisation of senior staff,[13] poor organisation of ward work and inadequate liaison between professional staff within hospitals, and sloppy discharge procedures.[14] These represent significant evidence that medical errors have become a very disturbing health issue with increasing daily occurrence in the last few decades.[15] Nonetheless, research indicates that a lot of medical errors can be corrected if the risk factors are highlighted and properly addressed.[3]

Surprisingly, the error reporting rate in hospitals by healthcare professionals is quite low[7,9] due to negative attitudes towards reporting.[16] This has contributed greatly to the increasing rates of medical errors in hospitals. There are also clear indications that similar situations abound elsewhere.[7,8] Ideally, medical errors in hospitals should be at zero per cent, to enhance patient's satisfactions.

The current study was planned to ascertain the awareness level and demographic differences of the consequences of medical errors on patients' health, safety, survival and resources by healthcare professionals in Nigerian public hospitals.

Subjects and Methods

The descriptive, questionnaire-based study was conducted at five different public hospitals in Nigeria from August to October 2017, and comprised healthcare professionals who were permanent staff members.

The study was conducted according to the principles of the Declaration of Helsinki.[17] Approval was obtained from the University of Nigeria, Nsukka. The study was free from all forms of physical, psychological, social and economic harm or risk because the data collection process primarily relied on a descriptive non-invasive questionnaire.

The sample size was calculated using confidence level of 95% and confidence interval of 5.[18] The five hospitals constituted five clusters. Using convenience sampling, 40 participants from each of the sampled hospital were enrolled. Overall, a total of 200 healthcare professionals were used for the study. Only professionals who were permanent staff were included, while visiting consultants and those on contract or temporary appointment were excluded.

An adapted Awareness of medical errors questionnaire (AMEQ)[19] was the only instrument used for data collection. It is a 27-item questionnaire composed of two sections: sample characteristics, and awareness of the consequences of medical errors on patients. The two parts were bundled into one study package for the convenience of the participants. AMEQ is a four-point likert scale with response options that range from 4 = strongly agree; 3 = agree; 2 = disagree; and 1= strongly disagree. The questionnaire was self-administered to the participants in their respective offices and was written in English language to allowing responses from the participants without any bias. Prior to the administration of the questionnaire, permission was obtained from all the hospital authorities. Informed consent was taken from all the participants. The questionnaire had to be returned on the spot. SPSS 20 was used to analyse data. Descriptive statistics were used to express data in terms of mean, standard deviation, frequency and percentage. T-Test and one-way analysis of variance (ANOVA) were used. Dimensions assessed were safety, health, resources and survival. A mean score of >2.50 was taken as a cut-off value for acceptable level of awareness. Level of significance was set at $p<0.05$.

Results

Of the 200 participants initially enrolled, 186(93%) completed the questionnaire completely. Of them,

Table-1: Demographic Profile of Healthcare Professionals (N = 186).

	n	[%]
Gender		
Male	88	[47]
Female	98	[53]
Grand percentage	**186**	**[100]**
Age by birth		
Below 30	50	[27]
30-49	92	[49]
50+	44	[24]
Grand percentage	**186**	**[100]**
Job Role		
Healthcare assistant	64	[34]
Staff nurse	98	[53]
Doctors	24	[13]
Grand percentage	**186**	**[100]**

Table-2: Healthcare professionals' awareness of the consequences of medical errors on patients (N = 186).

Items	Mean ± S.D	Remark
Patients' health	2.67 ± 0.10	High
Patients' safety	2.81 ± 0.02	High
Patients' survival	2.34 ± 0.08	Low
Patients' resources	2.56 ± 0.01	High
Average Mean	**2.60 ± 0.05**	High

SD = Standard Deviation

Table-3: Demographic differences on healthcare professionals' awareness of the consequences of medical errors on patients and significant differences within variables (N = 186).

Variables	N	Mean ± SD	Level	P-value	Remark	Decision
Gender				0.31	*	Rejected
Male	88	2.48 ± 0.09	Low			
Female	98	2.52 ± 0.00	High			
Age (Years)				0.53	*	Rejected
Below 30	50	2.77 ± 0.02	High			
30-49	92	2.19 ± 0.08	Low			
50+	44	2.56 ± 0.01	High			
Job Role				0.02	**	Accepted
Healthcare assistant	64	2.13 ± 0.08	Low			
Staff nurse	98	2.53 ± 0.01	High			
Doctors	24	2.94 ± 0.00	High			

*Significant at .05 level, **Not Significant at 0.05 level; SD= Standard Deviation..

98(53%) were females, 92(49%) were aged 30-49 years, 98(53%) were staff nurses, 24(13%) were doctors and 64(34%) were healthcare assistants (Table-1). Overall mean questionnaire score was 2.60±0.05, indicating that the participants were aware of the consequences of medical error on patients. In terms of individual dimensions, the scores were acceptable for safety, health and resources (>2.50) but the mean score on patients' survival was 2.34±0.08 (Table-2).

Age and gender did not have significant impact on the level of awareness (p>0.05 each), but job position had a significant role in this regard (p<0.05) (Table-3).

Discussion

The current study in its descriptive nature has shown that the healthcare professionals were aware of the consequences of medical errors on patients' safety, health, and resources in Nigerian public hospitals. This finding has instigated some critical arguments. First, if the participants are aware of the consequences of the errors on patients, why do we still have increasing errors? Secondly, what is the position of safety culture as should be acceptable in hospital settings since safety is an integral part of the profession? Contextually, a safety culture should reflect the shared beliefs, perceptions, value and attitudes of healthcare professionals towards safety.[20] This is argued more potently owing to the prevailing evidences of substantial rates of the errors and adverse events in hospitals.[4,5] To the best of our knowledge, this study is the first to look into the awareness level of healthcare professionals with respect to the consequences of medical errors on patients in Nigeria.

In the current study, majority of the healthcare professionals surveyed were females, aged 30-49 years and were staff nurses. The female participants might have had a good number of encounters through child births and other reproductive health issues and so could play vital roles in defining their awareness status regarding the phenomenon. The healthcare professionals of the 30-49 years age bracket possess a great deal of experience, regarding the excruciating consequences of medical errors on patients. Such profound experience could be crucial in addressing concerns related to awareness in this regard. Other studies found age and gender as significant variables[21,22] and also as factors associated with medical error occurrences in hospital setting.[1,2]

The expected finding on the high awareness level of staff nurses in this study could be linked to their job roles in hospitals which are basically about care-giving and support to patients. These roles usually create ample opportunities for gaining rich experience that triggers a unique understanding of the grievous consequences of any form of error or adverse event on patients in hospitals. Research has earlier indicated that healthcare professionals had negative attitudes concerning reporting errors.[16] This study, therefore, posited that since the awareness level of the participants was not enough to reduce to zero per cent the rates of occurrences of medical errors and its consequences on patients in the hospitals, positive measures should be adopted, among others, through information,[23] decision-support systems,[24,25] improved methods for ordering, transcribing, dispensing and administering medications.[26]

The Nigerian government shall adopt measures that would harmonise, to a great extent, the prevailing awareness status of the professionals and cases of medical errors. In addition, the government should also organise routine trainings, workshops, conferences and lectures for healthcare professionals in hospitals. The essence of these programmes should be on drawing qualitative attention of the professionals to the critical need to reduce the rate of medical errors and its consequences on patients in hospitals. There is also need to adopt measures that would encourage error-reporting rates by healthcare professionals in hospitals.

The strength of the current study lies in its chosen methodology and its comprehensive nature. However, advanced statistical and research-based considerations need to be taken to conclusively establish the results obtained for generalisation. There is need to conduct an in-depth qualitative study on this phenomenon adopting different designs such as interpretative phenomenological analysis. This, no doubt, would provide the participants with the ample opportunity to share experiences and give detailed analyses and explanation regarding the phenomenon. The study focussed on healthcare professionals in Nigerian public hospitals. The result of this study may not be generalised or adopted in other countries. Hence, future studies are recommended to investigate the awareness level of healthcare professionals on the consequences of medical errors on patients in countries other than Nigeria. This is essential because there is indication that safety culture and medical regulations vary according to countries.

Conclusion

There is a need for the Nigerian government to raise awareness levels of healthcare professionals regarding medical errors and their consequences on patients in public hospitals.

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