

# Assessment of the perception of service recipients about the quality of work in health care professionals in the Children Emergency Room of a Tertiary Hospital in Nigeria

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## Abstract

The children emergency room (ER) is regarded as an essential section of hospitals and other healthcare settings where immediate medical and surgical care is given to children in need of urgent care. The conditions of the emergency room and the quality of service by the emergency room staff has been described as a major determinant of the socio-medical outcome of patients and their relatives. This is a hospital based cross-sectional carried out in the Children Emergency Room (CHER) of the Enugu State University Teaching Hospital, Enugu Nigeria. Parents and care-givers that presented with their sick children to the ER department were successively enrolled after obtaining consent. Information on their assessment of certain aspects of the emergency room environment and quality of service received from medical and administrative personnel working in the emergency room was obtained using a 5-point Likert assessment scale. Results were reported using frequencies, percentages and chi-square were applicable. Statistical significance was set at  $P < 0.05$ . Over half (59%) of the 83 respondents that presented to the emergency room during the study period were self-referrals and all (95.2%), but four respondents noted a significant improvement in the condition of their sick children following management in the emergency room. In all parameters assessed, most respondents rated the emergency room con-

ditions as moderate in noise level 69 (83.1), crowdedness 65 (78.3), comfort 49 (59.0) and cleanliness 41 (49.4) with an overall point score of  $2.97 \pm 0.33$  out of a possible five. Doctors were on average rated better than nurses and record clerk staff in politeness ( $P=0.001$ ), patience ( $P=0.002$ ), efficiency ( $P=0.002$ ), and adequate explanation of procedures ( $P=0.001$ ) while nurses were rated better than record staff in explanation of procedures to their patient ( $P=0.05$ ) but not in politeness ( $P=0.894$ ), patience ( $P=0.505$ ) and efficiency ( $P=0.982$ ). The rating of record clerks was significantly affected by the socio-economic class of respondents ( $P=0.036$ ) but not by gender ( $P=0.252$ ) or age of respondents ( $P=0.123$ ). None of the respondents' socio-demographic factors significantly determined their rating for the emergency room conditions and the quality of service by doctors or nurses. There is a need for a continued review of emergency room conditions in addition to training and re-training of staff in the children emergency room. This not only helps improve health outcomes but may also significantly reduce the duration of stay in the emergency room that in turn reduces congestion and the burden on the healthcare system.

## Introduction

The Children Emergency Room (CHER) is one of the most important sections of any hospital. Serious and emergency cases in children are stabilized here before they are moved to other sections of the hospital for further care. It is a key area of service in every tertiary health institution, dedicated to caring for babies, children and adolescents. It provides complete and coordinated care, meeting the unique needs of children and their families during medical emergencies.

The emergency room environment is fast-paced and highly stressful. It faces excessive crowding, resulting in a noisy, even chaotic environment with frequent workflow interruptions. The large volume of patients results in many being evaluated, treated, or even housed in the emergency room hallways, creating situations fraught with opportunities for error.<sup>1</sup> Since patients do not come on a scheduled basis, volumes can fluctuate a great deal, making it difficult to make staffing adjustments to meet sudden shifts in demand.<sup>2</sup> The children emergency room personnel should recognize how stressful illness or injury can be not only to the child but also to the family and should provide the highest level of care during these stressful and often unplanned peri-

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ods.<sup>2</sup> Both physical and mental demands on healthcare providers are higher in the CHER than in other sections of Pediatric care. They are required to see diverse cases and make rapid clinical decisions in a short while, often with insufficient patient information.<sup>3</sup> In addition, they may have to manage patient flow, listen to patients' and family members' complaints about waiting times and delays in care, track down missing laboratory or radiology results, and so on.<sup>4</sup> The conditions of the emergency room and quality of service by the emergency room staff, is a major determinant of social and medical outcome of patients and their relatives. Patients' perceptions of the quality of care generally affect their health behavior even after discharge. Positive rating of service quality seems to be correlated

with no hesitation about re-visiting or recommending the same hospital to someone else.<sup>5</sup> Hence, improvement in the quality of care delivered in CHER will have a positive effect on the health-seeking behavior of parents and caregivers for their children resulting in improved universal access to health care.<sup>6</sup>

Considering the nature of cases and flow of patients, a conducive working environment in CHER as well as a good relationship between health care workers and their patients and relatives are very necessary. Some studies<sup>7,8</sup> have been done in the environment but none addressed this important and crucial aspects of health service delivery.

This study is aimed at assessing the conditions of service as well as the quality of service rendered by the healthcare staff in CHER of ESUTH. Findings will give an idea on what is in existence and may provide information which might be useful in planning for better conditions and quality of service for improved outcomes in CHER. It may also serve as a basis for further research into ways of improving universal health care delivery and policy making.

## Materials and Methods

### Study area and design

This was a hospital based cross-sectional study that was conducted over a 3 months period (May-July 2017) in the Children Emergency Room (ER) of the Department of Paediatrics, Enugu State University Teaching Hospital (ESUTH) in Enugu State Nigeria. This tertiary health facility serves as a referral center offering specialized medical services to inhabitants of Enugu State and its environs. The children ER which runs 24 hours every day is manned by different teams of doctors and nurses each day. The children ER room offers specialized emergency services to children aged one month to eighteen (18) years. Patients and their care-givers are mainly responsible for procurement of drugs and other items used for treatment in the children ER.

### Study participants

This study focussed mainly on the subjective assessment of parents and/or caregivers that brought their children to the emergency room. Convenient sampling method was used to enrol study participants. After written informed consent was obtained, a validated structured questionnaire adapted from the one used in a similar study in the Paediatric Emergency Room of

the Hadassah Ein Kerem Hospital was used for data collection. Following presentation to the children ER, the investigators were made aware of the new potential participants. Time was allowed ( $\geq 48$  hours) for necessary management of the emergency case by the team on call. In cases where the care-giver was not emotionally or psychologically prepared to answer questions, more time was given for recovery, after which they were re-approached. The caregivers that gave consent were consecutively enrolled into the study. All information gathered from them was treated as strictly confidential. The questionnaires were administered by trained research assistants.

The Information obtained from the respondents were collected in three sections. In the first section, independent variables which included the socio-demographic parameters of respondents such as age, gender, marital status and occupation of the parents and/or care-giver of the sick child was collected. In the second section, information obtained included referral source (categorized as medical and non-medical source), main symptom at presentation, estimated wait time given on arrival to children ER (categorized as yes or no), first contact in the ER (categorized as medical student, nurses or a doctor) and outcome of the index ER visit (categorized as significant and no improvement). In the third section of the questionnaire the dependents variables were collected. The respondents were requested to respond on a scale of 1-5 their assessment of certain parameters pertaining to the environmental conditions of the children ER and the quality of service rendered by the three categories of staff (*i.e.* record clerks, nurses and doctors) usually in direct contact with sick children and their care-givers in the children ER. A modified 5-point Likert scale was used which rated respondent's responses as very high, high, moderate, low and very low.<sup>9</sup> For each parameter assessed, a score was calculated from these qualitative (ordinal) responses by converting them to quantitative (discrete) data. This was done by awarding 5 points for very high rating, 4 for high, 3 for moderate, 2 for low and 1 for very low ratings. The parameters assessed included some environmental conditions of the emergency room and quality of service offered by the emergency room staff during the management of admitted children of the respondents.

*Emergency room conditions* assessed using 4 key parameters with reliability co-efficient (Cronbach alpha) of 0.71. These included i) *Noise level* this referred to the level of environmental noise around the

children ER and how it affected the activities and relaxation of the sick child and the respondents. ii) *Crowdedness* which assessed the degree to which the children ER was packed with patients and amount of space respondents and their sick child had while in the ER. iii) *Comfort* which assessed how comfortable respondents and their ward were relative to the comfort they normally have in their homes. iv) *Cleanliness* assessed how clean respondents supposed the emergency room was.

*Quality of Service by Emergency Room Staff* was assessed using 4 key parameters with combined reliability co-efficient (Cronbach alpha) of 0.735. These included i) *Politeness* assessed the level of respect the emergency room staff showed to the patients in manners, speech, and behavior, ii) *Patience* assessed the capacity of emergency room staff to tolerate angry or irritated patients without becoming infuriated or furious themselves, iii) *Efficiency* assessed how promptly emergency room staff attended to health and social challenges of patients in the ER. iv) *Explanation given* assessed the degree of patient centeredness in the care rendered by the ER staffs by means of communication, empathy and updating patients on management stages.

### Ethics approval and consent to participate

Ethical clearance was obtained from the Enugu State University Teaching Hospital Ethics Committee (ESUTHEC). Before recruitment of each subject, written informed consent was obtained from every caregiver on behalf of their child. Participation in the study was entirely voluntary and no financial inducement whatsoever was involved. Participants were informed that withdrawal at any stage of study was guaranteed for them without any adverse effect to their sick child. All information was handled with strict confidentiality.

### Data entry and statistical analysis

Raw data collected from the study questionnaires were cleaned and imputed into Microsoft excel which was subsequently transferred and analyzed using IBM®SPSS version 22.0 (SPSS Inc, Chicago, IL). Student-t-tests and analysis of variance (ANOVA) where appropriate were used to compare how the outcome variables (*i.e.* the proportion and mean score of assessment of ER environment and staff) were predicted by the various sub-categories of the independent variables (*i.e.* socio-demographic parameters of respondents). Statistical significant value was set at a P-value of  $\leq 0.05$ .

## Results

### Characteristics of respondents enrolled in study

Eighty-three respondents whose children presented to the children emergency room and gave consent to participate were enrolled for this study. Of these, close to half were in the 31-40 years age bracket. Females constituted 86.7% of enrollees and 9-in-10 were married. Close to 50% had a post-primary education while 37.3% and 13.3% had a university degree or higher and primary education or less respectively. Based on maternal education and partner occupation, 27 (32.5%), 33 (39.8%) and 23 (27.7%) of the respondents were categorized as being in the high, middle and low-income class respectively. An almost equal proportion of the respondent's children were referred to the children emergency room by medical (41.0%) and non-medical (59%) personnel. A clear majority of respondents, 75 (90.4%) said their first contact on arrival to the emergency room was a doctor and only two of the respondents were given an estimated wait time before their children would be seen by a doctor. Fever 40 (48.2%), shortness of breath (15.7%) and diarrhea with vomiting 16 (19.3%) were the commonest presenting symptoms encountered in sick children of respondents seen in the children emergency room. Seventy-nine (95.2%) of the 83 respondents said their children made significant recovery after their visit to the children emergency unit (Table 1).

### Assessment of the children emergency room conditions

Table 2 shows the respondents assessment of the conditions of the children emergency room (ER) based on five parameters considered in this study using a 5-point Likert scale. Sixty-nine (83.1%) of the respondents reported that the emergency was moderately noisy and 78.3% also indicated that the ER was moderately crowded. Twenty-four, 24 (28.9%) said the level of comfort was low while 12.0% and 59.0% specified that the comfort level in the emergency room was high and moderate respectively. Only 3 (3.5%) rated the cleanliness of the emergency room as very high while almost similar proportion rated it as moderate (49.4%) and high (43.4%). Based on the respondent's ratings, cleanliness of the ER had the highest point score (3.46±0.67) of all parameter assessed followed by the comfort level in the ER with a point score of 2.83±0.62. The noise level (2.78±0.59) and degree of crowdedness (2.79±0.54) of the ER environment were slightly above the minimum score required for adequate ER conditions.

### Assessment of quality of service by staff in the children emergency room

Table 2 shows the respondents assessment of the ER staff based on 5 parameters using a 5-point Likert scale. On politeness, over half (54.2%) of respondents rated doctors as highly polite while 37.3% rated them as moderately polite. Forty-eight (57.8%) noted doctors as moderately patient and 28 (33.7%) as highly patient. Almost ¾th (72.3%) rated them as highly and 19.3% as moderately efficient while 56.6 and 39.8% rated doctors as moderate and high when it came to carrying patients along during management of their sick children. Similarly, nurses were rated moderately polite by 81.9% and 12.0% as highly polite. With regards to patience, 9.6% and 84.3% rated nurses as high and moderate respectively while 50.6% believed the ER nurses were highly efficient compared to 44.6% that rated them as moderately efficient.

Lastly, 20.5% and 77.1% rated the ER nurses high and moderate with regards to explaining procedures carefully to them during care of their sick children. For the record clerks in the emergency unit, 16.9%

vs. 80.7%, 9.6% vs. 86.7%, 43.4% vs. 56.6% and 9.6% vs. 89.2% of the respondents rated them as highly and moderately polite, patient, efficient and explanation well given respectively.

Table 3 shows the mean score of the parameters assessed among the ER staff based on rating of the respondents. Doctors had a better rating compared to nurses and record clerks in all parameters assessed with a significantly higher mean score in politeness ( $F=18.48$ ,  $P=0.001$ ), patience ( $F=6.44$ ,  $P=0.002$ ), efficiency ( $F=7.24$ ,  $P=0.002$ ), and adequate explanation of procedures ( $F=5.96$ ,  $P=0.001$ ). Nurses were rated significantly higher than record clerk by respondents with regards to the explanation of procedures to their patients ( $T=1.948$ ,  $P=0.05$ ) but were not significantly in rating compared to record clerk in politeness ( $T=1.340$ ,  $P=0.894$ ), patience ( $T=0.669$ ,  $P=0.505$ ) and efficiency ( $T=1.663$ ,  $P=0.982$ ).

When stratification analysis was done, there was no difference in mean score of male and female respondents in their assessment of the environmental condition of the ER ( $T=0.132$ ,  $P=0.895$ ), and the quality of service delivered by doctors

**Table 1. Characteristics of respondents surveyed in the children emergency department of the Enugu State University Teaching Hospital.**

Parameters (tot. 83)	Variables	N	%
Age of respondents	≤ 20 years	22	26.2
	21-30 years	15	18.4
	31-40 years	37	44.6
	≥ 41 years	9	10.8
Gender of respondents	Male	11	13.3
	Female	72	86.7
Marital status	Single	3	3.6
	Married	75	90.4
	Separated	5	6.0
Maternal educational status	University or higher	31	37.3
	Post-primary	41	49.4
	Primary or less	11	13.3
Socio-economic class	High	27	32.5
	Middle	33	39.8
	Low	23	27.7
Referral source	Medical personnel	34	41.0
	Non-medical	49	59.0
Main symptom at presentation	Fever	40	48.2
	Convulsion	3	3.6
	Shortness of Breath	13	15.7
	Diarrhea & vomiting	16	19.3
	Others	11	13.2
Estimated wait time given in ER	Yes	2	2.4
	No	81	97.6
First contact in the ER	Medical student	2	2.4
	Nurses	6	7.2
Outcome of ER visit	Significant improvement	79	95.2
	No improvement	4	4.8

ER, Emergency room.



( $T=0.687$ ,  $P=0.494$ ), nurses ( $T=0.552$ ,  $P=0.582$ ) and record clerk ( $T=1.155$ ,  $P=0.252$ ). Furthermore, there was no difference in the assessment score of the various age categories in the environmental condition of the ER ( $F=0.975$ ,  $P=0.409$ ), and quality of service delivered by doctors ( $F=1.339$ ,  $P=0.268$ ), nurses ( $F=0.462$ ,  $P=0.710$ ) and record clerk ( $F=1.982$ ,  $P=0.123$ ). Finally, there were differences in the assessment of record clerks among respondents in different socio-economic class. Respondents in the low socio-economic class significantly rated record clerk professionalism higher ( $3.36 \pm 0.28$ ) compared to those in the middle ( $3.18 \pm 0.36$ ) and high ( $3.14 \pm 0.27$ ) socio-economic class ( $F=3.476$ ,  $P=0.036$ ). There was however no difference within the socio-economic class with regards to their ratings for the environmental conditions of the ER ( $F=1.590$ ,  $P=0.210$ ) and quality of service delivered by doctors ( $F=2.221$ ,  $P=0.115$ ) and nurses ( $F=2.097$ ,  $P=0.129$ ).

## Discussion

The provision of quality health care is an international mandate. The care delivered in hospital-based emergency rooms (ERs) is an important element of the struggle to improve access to and quality of health care.<sup>9</sup> ERs are the critical staging area for severely ill patients and play a key role in half of hospital admissions.<sup>10</sup> Development of performance measurement standards for quality of pediatric emergency care is still a challenge world over. Constant concern regarding the improvement in treatment of acute and chronic diseases and preventive care is important to reduce the demand of children in emergency services.

Only a few participants regarded the cleanliness level in the Children Emergency Room as very high. A large proportion of the respondents considered the level of cleanliness in the emergency room as moderate to high. When a patient perceives cleanliness to be poor, it can become a key predictor of low patient satisfaction. Although cleanliness will not make a great

hospital, it can cause an otherwise good hospital to be perceived poorly. Environmental cleanliness affects the patient experience, patient satisfaction, perceived service quality, and actual quality in terms of infection prevention. Successfully achieving certain levels of cleanliness requires an interdisciplinary approach that involves the building design, operational and policy changes, education of personnel, and cultural changes to the organization.<sup>11,12</sup> Patients who perceive hospital cleanliness in a negative light often do more than give the hospital low scores. Many assume that they are at greater risk of acquiring a Health care Associated Infection (HAI) during their stay and will not recommend the hospital to others.

The overcrowding of children in Pediatric Emergency Rooms (PERs) has impaired the quality of care. Patients in need of agile care wait long hours with those demanding primary care and guidance; this compromises the quality of care. Over the past couple of decades, overcrowding in hospital ERs has resulted in

**Table 2. Assessment of the children emergency room condition and quality of service by staff in the ER of the Enugu State University Teaching Hospital.**

Variables	5-point Likert rating scale					Score Mean $\pm$ SD
	Very high	High	Moderate	Low	Very low	
<b>ER conditions, n (%)</b>						
Noise	0 (0.0)	1 (1.2)	69 (83.1)	7 (8.4)	6 (7.2)	2.78 $\pm$ 0.59
Crowdedness	0 (0.0)	2 (2.4)	65 (78.3)	13 (15.7)	3 (3.6)	2.79 $\pm$ 0.54
Comfort	0 (0.0)	10 (12.0)	49 (59.0)	24 (28.9)	0 (0.0)	2.83 $\pm$ 0.62
Cleanliness	3 (3.5)	36 (43.4)	41 (49.4)	2 (2.4)	1 (1.2)	3.46 $\pm$ 0.67
Overall score						2.97 $\pm$ 0.33
<b>Professionalism of ER doctors, n (%)</b>						
Politeness	5 (6.0)	45 (54.2)	31 (37.3)	1 (1.2)	1 (1.2)	3.63 $\pm$ 0.68
Patience	5 (6.0)	28 (33.7)	48 (57.8)	1 (1.2)	1 (1.2)	3.42 $\pm$ 0.68
Efficiency	4 (4.8)	60 (72.3)	16 (19.3)	2 (2.4)	1 (1.2)	3.77 $\pm$ 0.63
Explanation given	1 (1.2)	33 (39.8)	47 (56.6)	1 (1.2)	1 (1.2)	3.39 $\pm$ 0.60
Overall score						3.55 $\pm$ 0.18
<b>Professionalism of ER nurses, n (%)</b>						
Politeness	3 (3.6)	10 (12.0)	68 (81.9)	2 (2.4)	0 (0.0)	3.17 $\pm$ 0.51
Patience	4 (4.8)	8 (9.6)	70 (84.3)	1 (1.2)	0 (0.0)	3.18 $\pm$ 0.52
Efficiency	3 (3.6)	42 (50.6)	37 (44.6)	1 (1.2)	0 (0.0)	3.57 $\pm$ 0.59
Explanation given	2 (2.4)	17 (20.5)	64 (77.1)	0 (0.0)	0 (0.0)	3.25 $\pm$ 0.49
Overall score						3.29 $\pm$ 0.19
<b>Professionalism of ER record clerks, n (%)</b>						
Politeness	1 (1.2)	14 (16.9)	67 (80.7)	1 (1.2)	0 (0.0)	3.18 $\pm$ 0.45
Patience	2 (2.4)	8 (9.6)	72 (86.7)	1 (1.2)	0 (0.0)	3.13 $\pm$ 0.44
Efficiency	0 (0.0)	36 (43.4)	47 (56.6)	0 (0.0)	0 (0.0)	3.43 $\pm$ 0.49
Explanation given	1 (1.2)	8 (9.6)	74 (89.2)	0 (0.0)	0 (0.0)	3.12 $\pm$ 0.36
Overall score						3.22 $\pm$ 0.15

ER, Emergency room; SD, Standard deviation.

longer patient waiting times, decreased protection of patient privacy and confidentiality, and impaired patient evaluation and treatment.<sup>13-15</sup> The number of patients in an ER at any given time is a function of three variables: input (the number and types of patients seeking ER care), throughput (the process of care in the ER), and output (the movement of patients out of the ER).<sup>16</sup> Early investigators blamed ER crowding on patients who were seeking care for non-emergent conditions.<sup>17</sup> More recent research, however, has identified *output*, not input factors, as the major cause of Emergency Room crowding.<sup>18</sup>

In this study, sixty-nine (83.1%) of the respondents reported that the emergency was moderately noisy and 78.3% also indicated that the ER was moderately crowded. These situations could improve after the construction of new reception and triage areas. The fact that relations accompany patients to the main bowl of the Emergency Room could also contribute to the noise and overcrowding.

The study also showed that patients and their relatives on the average poorly rated the conditions of the emergency room in Enugu State University Teaching Hospital. This finding agrees with a similar study in University of Benin Teaching Hospital, where on the average, patient rated the sanitary condition of the emergency room as poor.<sup>19</sup> Another study had also documented

patients' dissatisfaction with some of the conditions in the emergency department of a district hospital in Pakistan.<sup>20</sup> A systemic review of 65 research articles on the impact of hospital's physical environment and patients' recovery noted that the hospital environment has effects on the healing process and the well-being of patients and their families. Furthermore, the review showed that the hospital environment can contribute to reducing errors, falls, and infections in addition to improving privacy and comfort.<sup>21</sup> It is thus vitally important that the physical conditions of the emergency rooms of hospitals be kept at optimal condition, not just to improve aesthetics but also reduce nosocomial infections and enhance patient's recovery.

Furthermore, our study revealed that patients and their relatives were marginally satisfied with the services and quality of service rendered by the emergency room doctors, nurses and record clerks with doctors rated significantly higher than other healthcare staffs. The high patient's satisfaction with doctor's service supports the finding in a teaching hospital in southern part of Nigeria where it was noted that 84%, 56%, 73.2% and 85% expressed satisfaction with their interaction with doctors, pharmacy, laboratory scientist and X-ray technicians respectively.<sup>19</sup> Though personal traits and social circumstances may significantly contribute to how staff interaction with patients, one could in addition speculate

that difference in training and/or higher economic incentive may also have contributed to the higher professionalism exhibited by doctors compared to other ER staffs.

Finally, the satisfaction ratings of record clerks differed significantly with patients' and their relative's socio-economic class. It was noted that the higher the socio-economic class, the lower the satisfaction and rating for the record clerk staff services.

### Limitations

The questionnaire used in this study was an adaptation from a similar done in the Paediatric Emergency Room of the Hadassah Ein Kerem Hospital and was not validated before use in Enugu. Also, the information on emergency room condition and assessment of services was obtained from the respondents' subjective assessment. The emotional state of the respondents around the time of data collection may have positively or negatively influenced their responses thus introducing bias.

### Conclusions

There was marginal satisfaction with the quality of service rendered by the emergency room doctors, nurses and record clerks. The authors recommend the need for the hospital management in collaboration with relevant health department to continually review conditions of the emergency

**Table 3. Assessment of the children emergency room condition and quality of service stratified by socio-demographic parameters of respondents.**

Variables	Emergency Room Staff			Variables
	Mean score ± standard deviation			
Professionalism	Doctors	Nurses	Record clerks	F-test (P)
Politeness	3.63 ± 0.68	3.17 ± 0.51	3.18 ± 0.45	18.48 (0.001)
Patience	3.42 ± 0.68	3.18 ± 0.52	3.13 ± 0.44	6.44 (0.002)
Efficiency	3.77 ± 0.63	3.57 ± 0.59	3.43 ± 0.49	7.24 (0.002)
Explanation of events	3.39 ± 0.60	3.25 ± 0.49	3.12 ± 0.36	5.96 (0.001)
Gender	ER conditions	Doctors	Nurses	Record clerks
Male	2.95 ± 0.33	3.45 ± 0.96	3.23 ± 0.59	3.11 ± 0.38
Female	2.97 ± 0.33	3.57 ± 0.39	3.30 ± 0.39	3.23 ± 0.31
T-test	0.132	0.687	0.552	1.155
P-value	0.895	0.494	0.582	0.252
Age of respondents	ER conditions	Doctors	Nurses	Record clerks
≤ 20 years	2.97 ± 0.42	3.73 ± 0.41	3.28 ± 0.31	3.35 ± 0.29
21-30 years	3.08 ± 0.22	3.45 ± 0.37	3.25 ± 0.45	3.20 ± 0.30
31-40 years	2.95 ± 0.32	3.48 ± 0.61	3.28 ± 0.39	3.15 ± 0.34
≥41 years	2.86 ± 0.25	3.56 ± 0.33	3.44 ± 0.66	3.19 ± 0.27
F-test	0.975	1.339	0.462	1.982
P-value	0.409	0.268	0.710	0.123
Socio-economic class	ER conditions	Doctors	Nurses	Record clerks
Upper	3.05 ± 0.24	3.39 ± 0.66	3.19 ± 0.39	3.14 ± 0.27
Middle	2.96 ± 0.37	3.67 ± 0.42	3.29 ± 0.38	3.18 ± 0.36
Lower	2.88 ± 0.36	3.57 ± 0.33	3.42 ± 0.47	3.36 ± 0.28
F-test	1.590	2.221	2.097	3.476
P-value	0.210	0.115	0.129	0.036

ER, Emergency room.

room and ensure patient-centred approach in delivery of healthcare services to sick children in the ER. There is also need for training and re-training of emergency room staff especially the non-medical staff for provision of better health services in the emergency room.

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