



# International Journal of Medicine and Health Profession Research

Journal home page: [www.ijmhpr.com](http://www.ijmhpr.com)



## ASSESSMENT OF CLIENT SATISFACTION IN ADULT EMERGENCY DEPARTMENT OF OROTTA NATIONAL REFERRAL HOSPITAL, ASMARA, ERITREA

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### ABSTRACT

**Introduction:** Since clients satisfaction is an important indicator of the quality of care provided, which ultimately affects the outcome of care, health seeking behavior and the job satisfaction of health personnel's in the Emergency Department(ED), meeting the needs of patients' play a vital role in the health care system. **Objective:** To describe the clients level of satisfaction in adult ED of Orotta National Referral Hospital, variation of client satisfaction based on socio-demographic variables and results of client satisfaction on the days of the week and within the shifts of the day. **Methodology:** This research was descriptive cross-sectional survey type of study. The study samples was adult patients and bystanders of critically ill patients who visited to the ED of ONRH from 28 March to 3 April. Census method was used to obtain the respondents and closed ended Press Ganey questionnaire was used to direct and collect data by interview. The sample size was 144 respondents of above 15 years old patients and relatives of critically ill patients. Data was analyzed using SPSS version 20 using 95% confidence level as a test of significance. **Ethical consent:** An ethical consent was sought out from the study participant before the commencement of the study and permission was obtained from the Asmara College of Health Sciences and ethical committee of ONRH to conduct the study. Pilot study was held in Halibet hospital between the last week of February and first week of March. **Results:** One hundred forty-four clients who visited our ED were included in this study. Out of these study participants 70.4% were satisfied with the overall service they received. The lowest satisfaction rate was observed on the information provided by the health professionals [37.9%] and higher satisfaction was observed on the professional relationship with the client [77.2%]. The participants who were satisfied on the factors related to the time they waited till they were seen by the physician were 75.8%. And 60.6% of the respondents were satisfied by the environmental condition of the ED. **Conclusion:** This study provides about the level of satisfaction of adult clients at ED of ONRH. It indicates a higher rate of dissatisfaction in the overall information delivered by the health care professionals. Thus the responsible authority needs to consider different interactions between those predictive factors in order to develop a better quality health Care.

### KEYWORDS

Satisfaction of adult clients, Responsible authority needs and Environmental condition of the ED.

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### INTRODUCTION

Eritrea is located in the Horn of Africa; it is administratively divided into six Zones, 57 sub zones, 699 administrative areas and 2,564 villages. Eritrea has 9 ethnic groups whose cultures are rich and varied as their compositions. There are wide variety of health services which are composed of individuals, organizations and hospitals that aim to meet the health care needs of target populations.

Those hospital services are largely done in intensive care units, medical, surgical and emergency units giving care to patients with or without appointment. Emergency department is one of the hospital service areas, which gives care to patients without any form of advance appointment.

Emergency departments provide care to millions of people every year. Emergency department not only serves as receiving center for critically or seriously ill people but also serve as clinic for 24 hours<sup>1</sup>. A hospital emergency department is recognized as the front door where significant number of admissions takes place. As patients can present at any time and with any complaint, a key part of the operation of an emergency department is the prioritization and resuscitation of cases based on clinical need and this process is called triage<sup>2</sup>. The formal definition of triage, taken from the French, is to sort into three groups. It is the process of deciding the priorities for therapeutic intervention of individuals. There are generally three categories of triage: Red or emergent, yellow or urgent, green or delayed, and clinic patients. In most emergency department some form of triage exists, no matter how small or large the department is<sup>3</sup>.

Most patients will be initially assessed at the triage. Those with evidently serious conditions, such as cardiac arrest, will bypass triage altogether and move straight to the appropriate part of the department or another area of the hospital. However, some patients may complete their treatment at the triage stage<sup>4</sup>. For instance if the condition is very minor and can be treated quickly, if only advice is required, or if the emergency department is not a suitable point of care for the patient.

Quality of health care can be conceived in various ways. In fact, during the last decade, health care managers, politicians, and other decision-makers have emphasized the importance of patients' perspective as an indicator of the quality of health care (Crow, Gage, Hampson, Hart, Kimber, Storey and Thomas, 2002). Measuring client's satisfaction is very essential as it helps to evaluate health care services from the clients' point of view, facilitate the identification of problem areas and help generate ideas towards solving the problems. As the ED is

considered to act as a gatekeeper of treatment for patients, it must achieve customer satisfaction by providing quality services. In many countries, surveys of patients' satisfaction and patients' experiences with hospitals are carried out regularly and the results are made available to the public, together with other indicators of health care quality<sup>5</sup>.

## BACKGROUND

Measuring patient satisfaction provides a voice for patients and is an important indicator that provides information on the effectiveness and quality of care (Pitrou *et al.*, 2009)<sup>6</sup>. Patient satisfaction is directly related to patient expectations (Graff *et al.*, 2002)<sup>7</sup>. Understanding patients' expectations and motivations for seeking medical care in the ED is an important part of maximizing patient satisfaction. In a study by Iliyasu Z. *et al* (2011)<sup>8</sup> reported that satisfied and dissatisfied patients behaved differently; satisfied patients were more likely to comply with treatment, keep follow up appointments and utilize health services. Such behavioral consequences related to satisfaction could affect outcome of care and health-seeking behavior<sup>9</sup>.

Health care recipients in developing countries are particularly sensitive to perception of the quality of health care delivery compared with those in advanced countries. While our patients will use traditional or alternative care without voicing their dissatisfaction with the services received, patients in advanced countries have strong consumer protection groups that demand for quality care<sup>10</sup>. This is particularly important in our environment where the public is suspicious of western medicine<sup>11</sup>. Additionally, research indicates that meeting desires of clients will enhance their satisfaction, and this satisfaction of the clients will improve the job satisfaction of health personnel<sup>12</sup>. Patients can report great patient satisfaction even though poor clinical care was received and vice versa<sup>13</sup>. Considering to the especial importance of ED, increase the satisfaction in this department has a remarkable effect on people's attitude toward the hospital<sup>14</sup>.

Patient satisfaction is a complex phenomenon and is difficult to change. Many EDs are overcrowded and resources are exhausted, making it seem unlikely

that appreciable improvements in patient satisfaction can be achieved without major facility renovations, an increase in the number of beds, or a significant increase in staffing. Generally speaking, these are not solutions that are feasible in most hospitals or health care systems<sup>15</sup>.

Although different studies vary in the order of importance of the various factors, a recent American clinical review identified that the waiting time, information dispersion, professional relationship, environmental condition seem to matter most<sup>16</sup>.

Every patient expects that on their arrival in the ED a qualified individual will immediately determine their emergent needs<sup>17</sup>. Satisfaction seems to depend not on how long the patient actually waits but whether this length is consistent with expectations<sup>12</sup>. Increases in wait times increase patient anxiety and decrease self-control<sup>18</sup>. And in a research done by Boudreaux, Cruz & Baumann (2004) also showed patient in pain or discomfort, the wait seems even longer. If patients feel the wait is shorter than expected, patient satisfaction increases. Encouraging support from family members and friends also helps patients relax and perceive the wait as shorter. Additionally, providing information about delays and wait times and frequent staff communication can influence the experience of waiting<sup>19</sup>. Moving patients quickly to treatment demonstrates respect for patient time and increases patient Satisfaction<sup>20</sup>.

Patient experience can be improved by designing information and communication that set expectations for an ED visit reducing anxiety and confusion and helping patients plan appropriately for their experience. Providing the patients with information in all phases of the care process, giving the opportunity to ask questions, resolving doubts and providing legible and easily understood discharge instructions all contribute to increasing patient satisfaction<sup>21</sup>. Patients often express considerable anxiety about their ability to care for themselves after discharge. Patients need understandable, detailed information regarding medications, physical limitations, dietary needs and information about follow-up care<sup>22</sup>. The information given should be using effective language and tone in communication which demonstrates courtesy and caring. Providing

information engages patients in the process of decision making and demonstrates respect for the patient. Patients are happier when they understand what is happening to them and why. Further, language barriers reduce comprehension and involvement in decision-making, and decrease adherence to treatment, including medications<sup>23</sup>. One recent study found that the use of professional interpreter services dramatically increased satisfaction with patient-provider communication during the ED visit, for patients and all types of providers-including triage nurses, doctors and discharge nurses<sup>24</sup>.

Patients evaluate satisfaction with care they have gained, judging their care by the way they are treated as a person, not by the medical treatment they received. Often patients receive the impression that hospital staff are too busy to help or to properly answer questions. If service quality is the essence of patient satisfaction, caring and comforting behaviors exhibited by health care providers play a significant role in creating patient and family satisfaction in the emergency department. Communication appears as a key point for patient satisfaction, contributing to the quality of the patient's outcome, as well as the individual's experience. Improving caregivers' communication skills increases patient satisfaction<sup>25</sup>. Health care is a service industry and the interpersonal skills of all ED staff are crucial to build patient satisfaction (Graber, 2004). People attending the ED are in pain, frightened and stressed and often show their distress in ways that can be difficult for staff to handle. When ED staff is familiar with not only the patient's clinical condition but also the patient and family emotions and expectations, it demonstrates caring and respect for the patient and family. Unfortunately, caring behaviors may become invisible to patients in the midst of the multitude of technologies that focus on curing rather than caring for patients. Patients want their caregivers to listen without interruptions, to answer questions and explain the treatment, and to demonstrate courtesy and professional attitudes.

Interestingly, professional/expert perceptions about what constitutes good quality ED care do not always agree with patient perceptions. While patients want

good clinical outcomes, they have to trust clinicians to continuously review and improve their clinical and technical skills (Muntlin, 2006). The art of caring correlates with patient satisfaction emphasizing that speed cannot compensate for rudeness, disrespect or an uncaring attitude<sup>16</sup>.

Patients want place to wait including pleasant surroundings and comfortable seating. Waiting rooms need to provide privacy in a public space and be flexible enough to accommodate different types of users. It needs to provide comfort in uncomfortable situations and support learning and education within the boundaries of the space<sup>14</sup>. Patients who have their conversations overheard are more likely to withhold information from staff and less likely to have had their expectations of privacy met. In emergency departments, noise can be an even larger issue. Noise levels have been measured in EDs than in inpatient care units in several studies. One study conducted at Johns Hopkins Hospital in Baltimore, Maryland, pointed to the potential impact of noise upon patient safety in the ED, as well as privacy concerns with patients disclosing information to caregivers<sup>14,15</sup>. Findings from a recent study indicate a direct and significant correlation between respecting privacy and patient satisfaction<sup>17</sup>. Since nursing staff play a central role in patient care and hospital administration, creating healthy work environments often change the organizational culture and results in improved patient satisfaction<sup>26</sup>.

## **PROBLEM STATEMENT**

Patient satisfaction is a complex phenomenon which is not only determined or affected by medical care provided by health care professionals. Unsatisfied patients may not follow prescribed treatments, discharge instructions, keep follow up appointment and likely to file complaints and lawsuits. Further it affects the health seeking behavior especially in developing countries like Eritrea in which health care recipients are particularly sensitive to perception of the quality of health care delivery compared with those in advanced countries. While our patients will use traditional or alternative care without voicing their dissatisfaction with the services received. Additionally, research indicates that patient

dissatisfaction is related to employee dissatisfaction, decreased morale and staff non-retention which in turn affects the outcome of health care.

Quality of care is a corner stone in an organizations and 'Each site should determine patient satisfaction through formal patient satisfaction surveys or validated continuous random sampling. Since this is a vital component of continuous quality improvement.

In a study conducted amongst seven developing countries, researchers who directly observed the clinical practice, found that 75% of cases were not adequately diagnosed, treated or monitored. Though the most frequent explanation for the variation and low-quality care in the developing world was lack of resources. One study noted that despite having high expenditure and adequate facilities, patients were often not satisfied with the health care they received (gonder).

Orotta national referral hospital is committed to provide exemplary care that meets or exceeds the expectations of service users. Emergency Department (ED) is the gateway of the Institution and provision of quality assured services has a paramount importance for the department. As an ED operating in a low-income country (LMIC) it becomes important to understand the level of patient satisfaction to improve the service provided by the ED. In our setting despite various activities are implemented by health professionals to increase patient's satisfaction there are still many patients as well as their relatives complaining to the health service given in the emergency ward. Despite this no study up to our knowledge is present that asses patients satisfaction towards the care given in adult emergency unit of ONRH. In addition there is lack of evidence that addresses complaints aroused from service users of ED of ONRH. This study will help to address this.

## **RESEARCH STATEMENT**

Assessment of client satisfaction in adult emergency department of Orotta National Referral Hospital.

### **Research Question**

- Does the emergency department clients satisfied with the service received?

- Does patients' satisfaction vary with socio-demographic status?

### **Significance and Need of the Study**

Eritrea is a developing country working to achieve good health care services. This Orotta National Referral hospital is responsible to provide super specialist care to the target population. As this hospital has well functioned ED, many people get advantage. Unfortunately, no studies has been conducted in this ED on clients' satisfaction. Therefore it is very important to have a study in these places to understand to how extent the clients are satisfied. As health care professionals, it is our responsibility to modify the necessary things for the benefits of clients. This can help not only to increase clients' satisfaction but also to increase the effectiveness of care.

And taking in to consideration that emergency admitted patients require an urgent and well organized care, it is worthy to study the patients' satisfaction towards the service given in the emergency wards.

- By the end of this study the research will assess the level of patients satisfaction on the selected factors, the information gained will provide the appropriate authority to know the quality of health service given in the emergency departments.
- After knowing the level of satisfaction the responsible authority will consider whether an intervention is needed in developing effective protocols and guidelines in improving patient satisfaction as it affects the outcome of health care and health seeking behavior.
- This study can also be used as a baseline for further research.

### **RESEARCH OBJECTIVE**

#### **General objective**

The general objective of this study was to describe the overall client's satisfaction in the emergency department of Orotta national referral hospital.

#### **Specific objectives**

- To describe the level of clients satisfaction *in terms of* waiting time, information dispersion,

professional-client relationship and environmental condition.

- To describe the variation of clients' satisfaction based on socio demographic data.
- To observe the variation of clients satisfaction on days of the week and shifts of the day on these factors.

### **Assumption**

The researchers expect that the clients who visit the emergency department of Orotta National Referral Hospitals will be less satisfied.

## **RESEARCH METHODOLOGY**

### **Research Approach**

The study was based on quantitative research approach and was aimed to assess the satisfaction of clients based on selected factors

### **Study Design**

This research was cross-sectional survey type of study.

### **Study Variables**

In this research the study variables were;

- Patients' satisfaction
- Waiting time, information dispersion, professional - patient relationship, and environmental conditions
- Socio-demographic factors

In this research the researcher investigated the relationship between the effect of the selected factors which are the waiting time, information dispersion, professional patient relationship, and environmental conditions on patients' satisfaction including their socio-demographic data.

### **Measuring tools**

Researchers used the Likert five point scale to classify the level of satisfaction and the clients was asked to put their satisfaction as very dissatisfied, dissatisfied, average, satisfied or very satisfied.

### **Study Population**

1. Target population- all clients who visited ED of ONRH during the time of study and met the inclusion criteria.

### **Inclusion criteria**

- 15 and above years old patients who visit to the ED.

- Relatives of those critically ill patients who can't respond to the interview in the ED.

#### **Exclusion criteria**

- Relatives who were not present during admission
- Debilitated or disoriented patients without relatives
- Clients who refused to give consent
- Clients who are relatives of the emergency department staffs
- Client who have language barrier

#### **Study Area**

This research was conducted in ONRH. Orotta Medical Surgical National Referral Hospital is the largest referral hospital in Eritrea which is located in southern west of Asmara. It contains emergency, Intensive Care Unit, Medical and Surgical departments. The emergency department of Orotta National Referral Hospital has structured setting which contains triage, medication room, procedure room, as well as the red, yellow and green rooms. This emergency department has around 1400 clients every month. This department has one senior Doctor, four internship medical students and 16 nurses working in three shifts and it accommodates 15 beds.

#### **Sampling Technique**

The researchers used Census method.

#### **Sample size**

In this study 144 respondents were taken during the one week data collection time.

#### **Data Collection Tools and Methods**

Primary data was collected using, Press Ganey close ended, questionnaire based interview. The questionnaire was developed in English, which was translated to Tigrigna and back translated to English by different person to check for consistency. This questionnaire consists the demographic information as a tool and general questions which assess the level of patients' satisfaction towards the waiting time, information dispersion, professional-patient relationship, and environmental condition. Interview was conducted based on questionnaire after taking written and verbal consent, orientation about the aim, purpose, and ethical issue. Data was filled with pen to prevent any addition or deletion of response by researchers. These questionnaire based interview

was conducted after the emergency management of the patient.

#### **Validity**

This research was valid as the researchers are using a standard questionnaire and scoring system. Further validity was checked from the comments and consultation of advisor and statistician.

#### **Reliability**

This study was reliable as it followed questionnaire based interview.

#### **Data Analysis**

Initially the response was edited for any errors and omissions in the field area and was corrected. Then the raw data was coded into serial number as 1, 2, 3, 4 and 5 respectively and entered to Microsoft Excel. Finally the data was loaded into the SPSS version 20 and analyzed using appropriate descriptive analysis at 95% confidence level as a test of significance.

#### **Ethical and Legal Consideration**

A formal letter was written which contain information about the aim and site of research with signature of school head of nursing and college of health science. This letter was submitted to director general of Orotta national referral hospital. In addition, after brief explanation of the purpose and benefits of the study a verbal consent was obtained from the study participants and those who were volunteer was interviewed alone to respect their privacy. The confidentiality was assured by excluding their names and allowing them to withdraw at any point from the study.

#### **Pilot Study**

The pilot study was conducted on 16 clients at Halibet National Referral Hospital to test the feasibility of the questionnaire and research methodological issues for 2 days between the last week of February and first week of March. Small number of samples was selected from the target population and those who met the inclusion criteria were interviewed.

## **RESULTS**

This graph 4.1 shows clients satisfaction in waiting time and from the 144 participants 2.8% were very dissatisfied, 5.5% dissatisfied, 15.9% average, 51.7%

satisfied and 24.1% reported that they were very satisfied.

The Figure No.4.2 depicts about the overall satisfaction in information dispersion was reported as, 2.1% very dissatisfied, 18.6% dissatisfied, 41.4% average, 33.1% satisfied and 4.8% very satisfied.

The Figure No.4.3 shows the distribution of overall satisfaction in patient professional relationship and it is reported as, 1.4% very dissatisfied, 2.1% dissatisfied, 19.3% average, 70.3% satisfied and 6.9% very satisfied

The Figure No.4.4 shows the overall satisfaction of clients in environmental condition and it is reported as, 0.7% very dissatisfied, 4.1% dissatisfied, 34.5% average, 57.2% satisfied and the remaining 3.4% very satisfied.

#### **The distribution of the mean OS by Socio-demography**

The Figure No.4.5 shows that the mean OS satisfaction of females was (3.73) and males (3.61)

The Figure No.4.6 shows that the highest mean satisfaction was among respondents whose age is 60 and above (3.83) and least was among teenagers (3.43).

This Figure No.4.8 shows the mean Os, the higher satisfaction was seen among those who have visited the ED more than one (3.82)

The Figure No.4.9 shows that the highest mean satisfaction was among the direct admitted respondents (3.75) and 3.50 for those referral respondents.

The Figure No.4.10 shows that the overall mean Satisfaction was higher on the Night (3.76) and least on the Afternoon (3.60).

The Figure No.4.11 shows that the Overall mean Satisfaction was least on Saturday (3.47)

The Figure No.4.12 shows that from the total 144 samples the overall satisfaction of clients in ED of ONRH was, 0% very dissatisfied, 3.4% dissatisfied, 26.2% average, 68.3% satisfied, and 2.1% were very satisfied.

## **DISCUSSION**

### **Demographic characteristics**

The distribution of respondents according to basic demographic characteristics at the time of the study

in ONRH. Out of the 144 respondents 42.1% were males and the remaining 51.7% were females. The 64.8% of the respondents were the patients by themselves and 35.2% were the relatives of the critically ill patients. Looking at the age distribution 14.5% were aged between 15-19, 51.7% were 20-39, 25.5% were 40-59, and the 8.3% were above 60 years old. The respondents were considerably varied with their educational status in which 7.6% had never attended to school, 11% were reached elementary level, 20% were junior level, 42.1% were high school level and the remaining 19.3% were at the college level. Moreover 40% of the respondents were unemployed and 60% were employed. When we see the other characters of the respondents 70.8% were directly admitted by themselves and the remaining 29.2% were referred from other health facilities. Out of the total respondents 53.8% were visited the emergency department for their first time and 46.2% has more than one visiting experience.

### **Regarding to waiting time**

This research shows that 72.4% of the respondents graded their satisfaction towards the time they have waited until they get first physical exam as good or very good, 20% average and 7.5% poor or very poor. And from those who reported dissatisfied 12.4% were again dissatisfied with the information given about the delay in the triage. In contrast research done in Morocco shows 79.2% of the respondents who were dissatisfied reports that waiting time is the main cause for their dissatisfaction<sup>27</sup>. And also a research done in Iran pointed out that waiting time was one of the factors which scored low satisfaction (26.2%)<sup>28</sup>. This difference can be possibly due to the difference in number of patients they serve every day.

### **Regarding to Information Dispersion**

Looking to the OS towards information given most of the respondents (41.4%) were neither satisfied nor dissatisfied, 20.7% reported dissatisfaction, and 37.9% graded their satisfaction as good or very good. Further analysis shows that the level of satisfaction of every part of information was average and below it i.e. current condition (49.7), about medication (52.4%), prognosis (69.7%), aim and results of investigation (53.1%), home care (69.7%),

follow up care (63.4%). Similarly dissatisfaction was seen in Morocco in the information given on the delay in waiting time (79.2%) and results of investigation (53.8%)<sup>27</sup>. In contrast findings in Iran shows that majority of the respondents are satisfied with the information they have got i.e. about medication (67.2%), follow up care (72.8%), and current condition (67.2%)<sup>29</sup>. This difference is possibly due to the difference in patient to professional ratio. In our research regardless of the amount of information, every information was given in the language clients can understand which accounts for 81.4% satisfaction.

#### **Regarding to patient professional relationship**

Good communication between patients and care providers has been described as the single most important component of good medical practice, not only because it identifies problems quickly and clearly, but it also defines expectation and help to establish trust between the clinician and the patient. In contrast, bad communication, particularly, when the doctor appears indifferent, unsympathetic or short time make most patients dissatisfied (Iliyasu Z. *et al.*, 2010). Looking to the OS towards patient professional it is the factor that has scored highest satisfaction 77.2%. Further analysis shows that the highest satisfaction is seen on the courtesy of triage nurse (89.7%), care giving nurse (89.6%), and doctor (67.9%). Similarly research done in Iran has pointed out items related with a high level of satisfaction including physicians' courtesy and behavior with the patients (82.5%), and nurses' courtesy with the patients (78%) (Soleimanpour *et al.*, 2011). Despite the fact that courtesy is determinant factor for OS research done in Ethiopia shows that a large number (73.3%) of patients reported that they had been discriminated against or treated badly during the provision of service in the hospital. From those who are discriminated, lack of attention by staff (7.4%) and not spending enough time (8.5%) are among the main cause of discrimination<sup>27</sup>. Similarly our research indicates that 12.4%, 5.5% are dissatisfied with attention of the staff towards their complaint and time spent with them respectively. This difference could be possibly due to socio-cultural difference. The interest of care provider's to include

client in decisions about their treatment was graded as satisfactory by 60.3% respondents in Iran<sup>28</sup> which is greater than what is scored in our research 47.6%. This difference can be possibly due to inappropriate patient to professional ratio.

#### **Regarding to environmental condition**

Looking to the environmental condition more than half of the respondents (60.4%) were satisfied with the overall cleanliness of the environment. This result is much lower than satisfaction reported in Nigeria which accounts for 87.4% of satisfaction<sup>29</sup>. Further observation on results shows that the main cause of dissatisfaction was the cleanness of toilet in which only 20.7% of those who have seen it are satisfied. This difference can be possibly due to the difference in number of cleaners and the infrastructure of the toilet. Our findings also indicate that only 9% are dissatisfied with the comfort during physical examination. This result is similar with what is found in Iran in which only 15.3% of the sample was dissatisfied with the comfort during physical examination especially on examination process done by students<sup>27</sup>. Considering the fact that overcrowded emergency departments are high risk environment for medical errors and pose a threat for patient safety<sup>28</sup>, 72.4% of our samples are satisfied with the crowding in the sleeping and waiting room.

#### **Overall satisfaction**

Our study like similar other studies shows high general satisfaction, although there are unmet needs. The overall satisfaction of the clients with service received from this center [70.2%] is lower than that of similar study done in Iran shows 86.5% rated their satisfaction above average and 13.5% were dissatisfied. This may be due to the advanced medical care in Iran, the difference in the study population or the difference in patients' expectation, but higher than other studies. For instance a study done in Ethiopia shows that 51.7% were satisfied. This may be due to variation in study population, expectation of the patient experience or awareness of the people on what care to receive.

#### **Regarding the effect of Socio-demographic background on OS**

Looking to the effect of Socio-demographic background on OS, the mean level of satisfaction for

male was 3.61 and that of females was 3.73, this also supported by the research conducted in Iran in which gender doesn't have any significant impact on satisfaction<sup>27</sup>. Comparing the mean OS among the weeks of the day, the highest mean OS was in Thursday which is 3.78 and least was on Saturday 3.53. In opposite, a research done in Ethiopia shows that visiting days also had an effect on satisfaction of patient with emergency care provided ( $p < 0.05$ ). Patients who arrived on Monday were less likely to be satisfied when compared to those visiting on Sundays (Taye *et al.*, 2014). Surprisingly the highest mean OS was scored on the night shift (3.76) and least on the afternoon (3.60). Similarly in Iran although the overall dissatisfaction rate for the night shift was less than that for the other shifts, there was no meaningful statistical difference among the different shifts<sup>27</sup>. Looking on educational background our research shows that the highest mean OS found among those who completed junior (3.76) and least was among who completed elementary (3.50) this difference was also found to be statistically insignificant this finding is also supported by the research done by Soleimanpour *et al* in Iran on 2011. In our research the mean OS for those who have visited the ED for the first time [3.56] was higher than for those who visited more than one [3.82]. This may be because previous exposure can reduce their level of expectation on the coming next visit.

### **Recommendation**

Based on the results of this study these facts are to be recommended:

- The responsible authority must consider and modify the infrastructure and neatness of the toilet.
- The staff members of the ED of Orotta National referral hospital are recommended to provide adequate information to the clients about their health condition.
- We recommend further research to be done in a nationwide to address current condition of client satisfaction to the service received.
- The responsible authority have to do regular assessment of staff performance and the available facility in this department.

- Periodic patient satisfaction survey should be institutionalized to provide feedback for continuous quality improvement
- There were only 2 nurses per shift; so, as it is an emergency department the researchers recommend the responsible authority to increase the number of staffs for better work.
- For achieving a depth description of patient satisfaction researchers recommend for a qualitative study to be done either by those researchers or by others

### **Limitation of the study**

- Less population coverage.
- This study is restricted only to the clients of adult emergency department of Orotta National Referral Hospital not represent to all Eritrean hospitals.
- Lack of previous studies done in our country related to this topic.
- Shortage of time for the study period.
- The data may be influenced by characteristics and attitude of the interviewer.

The staff was not blinded that a study was done on patient satisfaction.

**Table No.1: Distribution of respondents by Socio-demographic background**

S.No	Background characteristics	Number	%	
1	Sex	Male	61	42.4
		Female	83	57.6
2	Age group	15-19	21	14.6
		20-39	74	51.4
		40-59	37	25.7
		60 and above	12	8.3
3	Educational status	Illiterate	11	7.6
		Elementary	16	11.1
		Junior	29	20.1
		High school	61	42.4
		Higher education	27	18.8
4	Mode of Entry	Referral	42	29.2
		Direct admission	102	70.8
5	Number of visit	First time	77	53.5
		More than one	67	46.5
6	Time of visit	Morning	55	38.2
		Afternoon	55	38.2
		Night	34	23.6
7	Day of visit	Monday	21	14.6
		Tuesday	15	10.4
		Wednesday	28	19.4
		Thursday	23	16.0
		Friday	21	14.6
		Saturday	19	13.2
		Sunday	17	11.8

**Table No.2: Satisfaction to individual part of information**

S.No	Information	Very dissatisfied	Dissatisfied	Average	Satisfied	Very satisfied
1	Reason for delay during waiting time	14.3%	37.1%	58.6%	37.1%	2.9%
2	Information about current condition	15.9%	13.8%	20%	42.8%	6.2%
3	Information about medication	20.6%	21.3%	14%	39%	5.1%
4	Information about prognosis of disease	24.1%	27.6%	17.9%	26.2%	4.1%
5	Information about aim and result of investigations	20%	20%	13%	31.7%	3.4%
6	Information about what to do at home	28.3%	29.7%	11.7%	25.5%	4.8%
7	Information about follow up care	19.3%	31.7%	12.4%	26.2%	6.2%

**Table No.3: Of client satisfaction on patient professional relationship**

S.No	Patient professional relationship	Very dissatisfied	Dissatisfied	Average	Satisfied	Very satisfied
1	Courtesy of triage personnel	1.4%	.7%	7.6%	68.1%	22.2%
2	Courtesy of nurse	0%	2.8%	6.3%	64.3%	26.6%
3	Interest of nurses in implementing Doctor's order	1.4%	2.8%	9%	66.2%	20.7%
4	Courtesy of doctors	6.1%	1.5%	6.1%	64.9%	21.4%
5	Did they ask you about previous medical history	11%	13.8%	11%	52.4%	11.7%
6	Nurses interest in listening and solving problem	8.3%	4.1%	10.3%	65.5%	11.7%
7	Your participation in decision making	9.7%	13.8%	29%	40.7%	6.9%
8	Time spent by the doctor	5.3%	9.9%	14.5%	64.1%	6.1%
9	Number of visits by the doctor	4.6%	11.5%	13%	61.8%	9.2%
10	Time spent by the nurse	4.1%	1.4%	15.9%	63.4%	15.2%

**Table No.4: Of client satisfaction on individual factors of environmental condition**

S.No	Environmental condition	Very dissatisfied	Dissatisfied	Average	Satisfied	Very satisfied
1	Comfort and cleanliness of waiting room	2.8%	4.1%	15.9%	57.2%	20.0%
2	Comfort during physical examination	2.8%	6.2%	15.2%	66.2%	9.7%
3	Cleanliness of the toilet	16.8%	32.7%	22.4%	26.2%	1.9%
4	Comfort and cleanliness of the beds and sleeping rooms	5.7%	8.6%	24.3%	53.6%	7.6%
5	Crowding in waiting and sleeping room	3.4%	4.1%	20.0%	61.4%	11.0%

**Table No.5: The mean OS by Gender**

S.No	Sex	Male	Female
1	Waiting time	3.8	3.94
2	Information dispersion	2.93	2.93
3	Professional patient relationship	3.75	3.86
4	Environmental condition	3.44	3.69

**Table No.6: Mean satisfaction based on clients' age**

S.No	Age	15-19	20-39	40-59	Above 60
1	Waiting time	3.52	3.89	4.00	4.08
2	Information dispersion	2.57	2.93	3.11	3.00
3	Professional patient relationship	3.38	3.81	4.00	4.00
4	Environmental condition	3.62	3.49	3.73	3.67

**Table No.7: The distribution of the mean satisfaction among individual factors of ED depending on educational level**

S.No	Educational level	Illiterate	Elementary	Junior	High school	College
1	Waiting time	3.91	3.75	3.90	3.97	3.74
2	Information Dispersion	2.73	2.75	3.21	2.89	2.93
3	Patient professional relationship	3.91	3.56	3.90	3.84	3.78
4	Environmental condition	3.73	3.63	3.76	3.51	3.84

**Table 4.8: mean satisfaction based on clients' number of visit**

S.No	Number of visit	For the first time	More than one
1	Waiting time	3.74	4.04
2	Information dispersion	2.82	3.06
3	Professional patient relationship	3.78	3.85
4	Environmental condition	3.55	3.63

**Table No.9: Mean satisfaction based on clients' mode of entry**

S.No	Mode of entry	Self-referred	Referral
1	Waiting time	3.99	3.62
2	Information dispersion	3.04	2.67
3	Professional patient relationship	3.76	3.93
4	Environmental condition	3.61	3.52

**Table No.10: The distribution of the mean satisfaction of the individual factors of ED depending on the time of visit**

S.No	Time of visit	Morning	Afternoon	Night
1	Waiting time	4.16	3.55	3.97
2	Information Dispersion	2.95	2.96	2.85
3	Patient professional relationship	3.78	3.78	3.91
4	Environmental condition	3.55	3.62	3.59

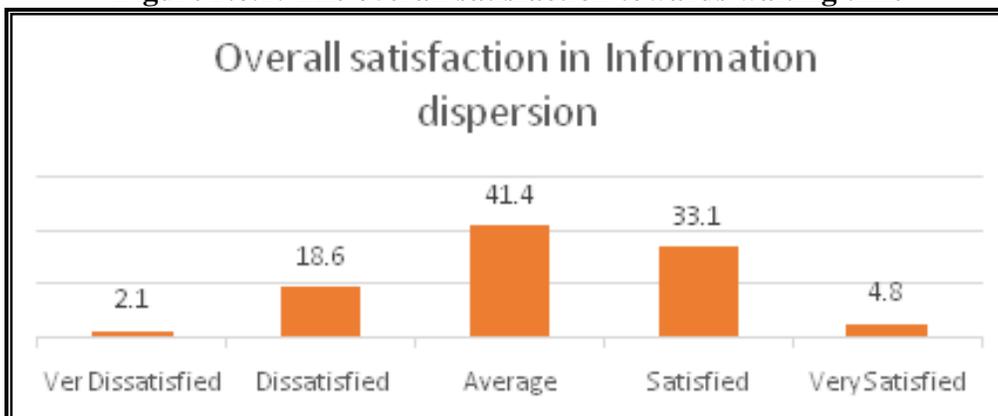
**Table No.11: Of mean satisfaction based on clients' day of visit**

S.No	Day of visit	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
1	Waiting time	4.43	3.87	3.79	4.00	3.62	3.84	3.59
2	Information dispersion	2.67	2.87	2.79	3.17	3.10	2.89	3.06
3	Professional patient relationship	3.76	3.80	3.75	3.87	3.76	3.89	3.88
4	Environmental condition	3.67	3.53	3.50	3.70	3.57	3.47	3.65

**Distribution of Overall Satisfaction respondents towards Selected Factors**



**Figure No.1: The overall satisfaction towards waiting time**



**Figure No.2: The overall satisfaction towards Information Dispersion**



Figure No.3: Overall satisfaction towards the patient professional relationship

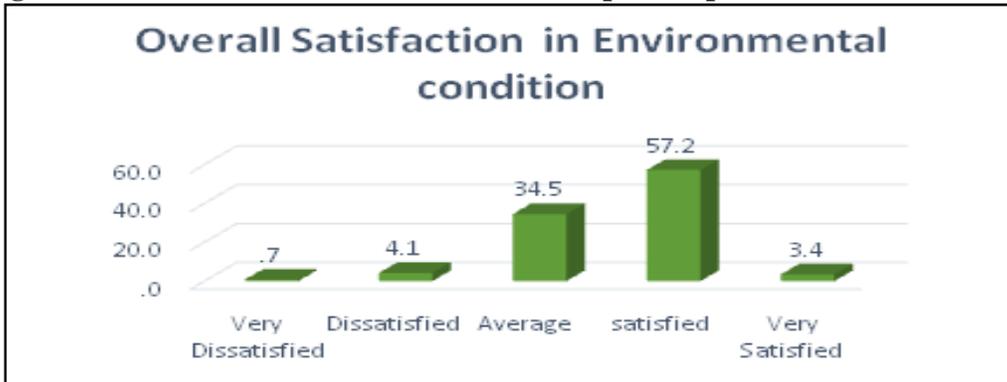


Figure No.4: The distribution of the overall satisfaction towards the environmental condition

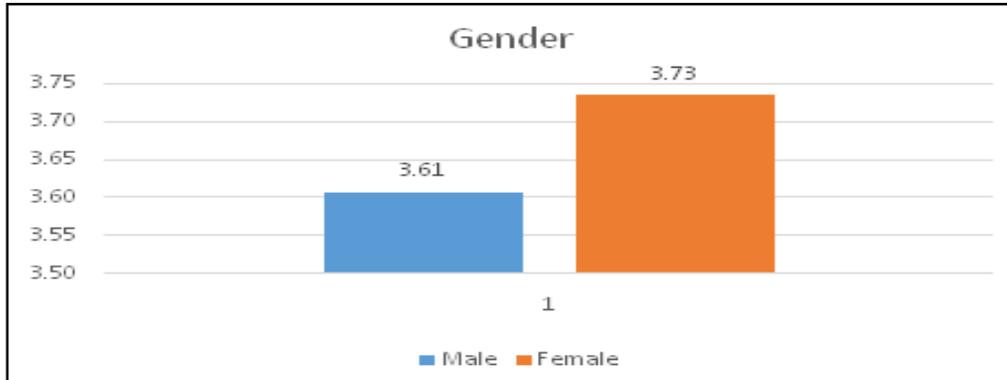


Figure No.5: The mean Overall Satisfaction by Gender

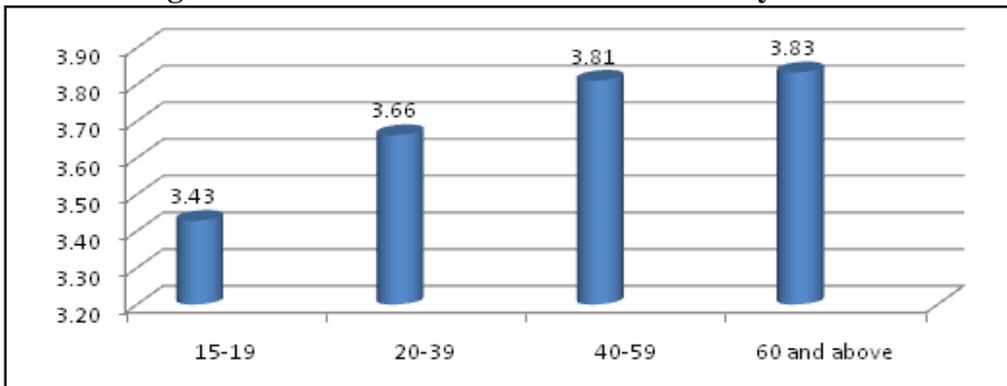
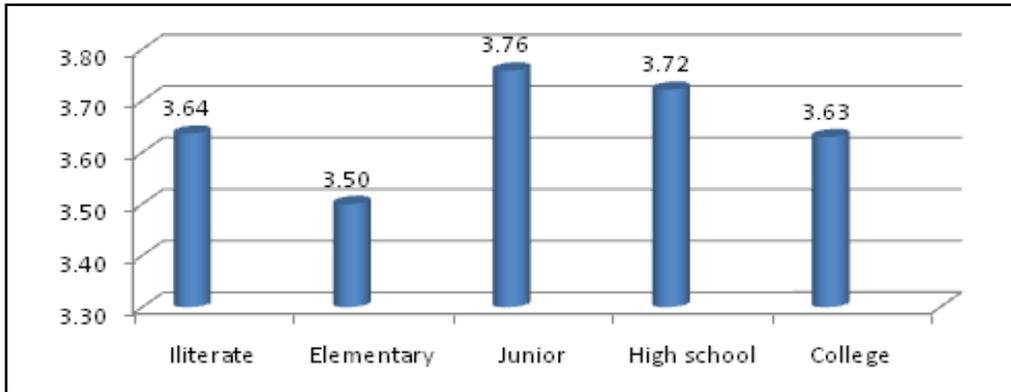
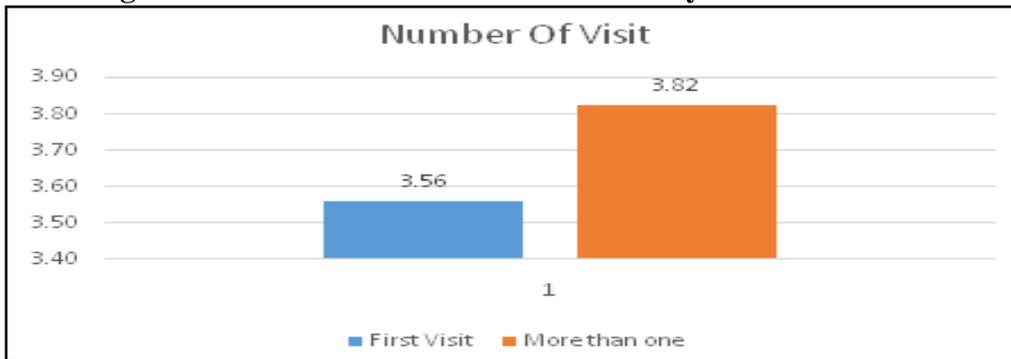


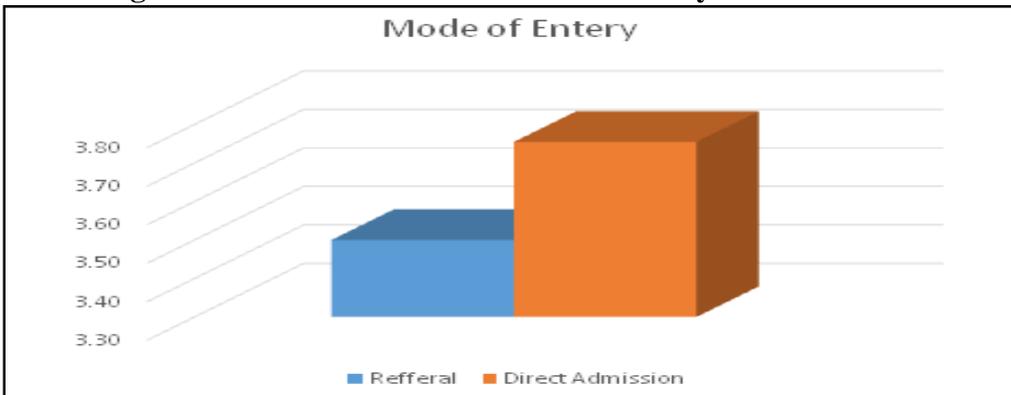
Figure No.6: The mean OS by Age



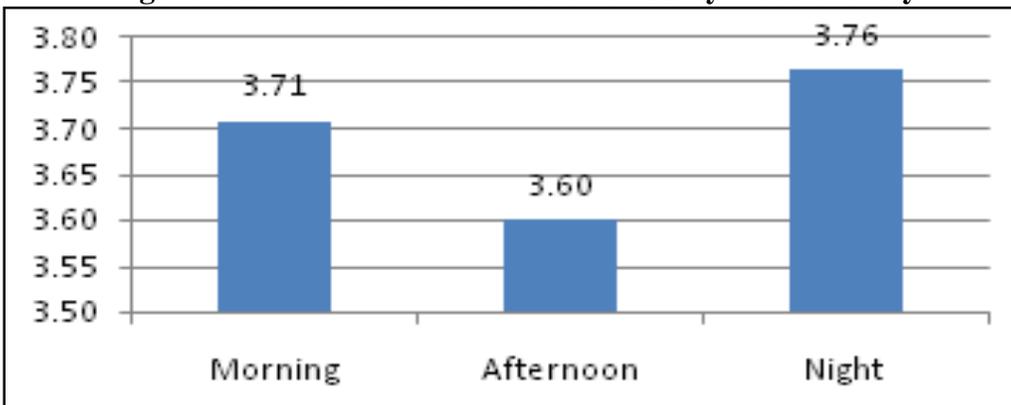
**Figure No.7: The distribution of mean OS by educational level**



**Figure No.8: The distribution of mean OS by number of visit**



**Figure No.9: The mean distribution of OS by mode of entry**



**Figure No.10: The distribution of mean OS among shifts of the day**

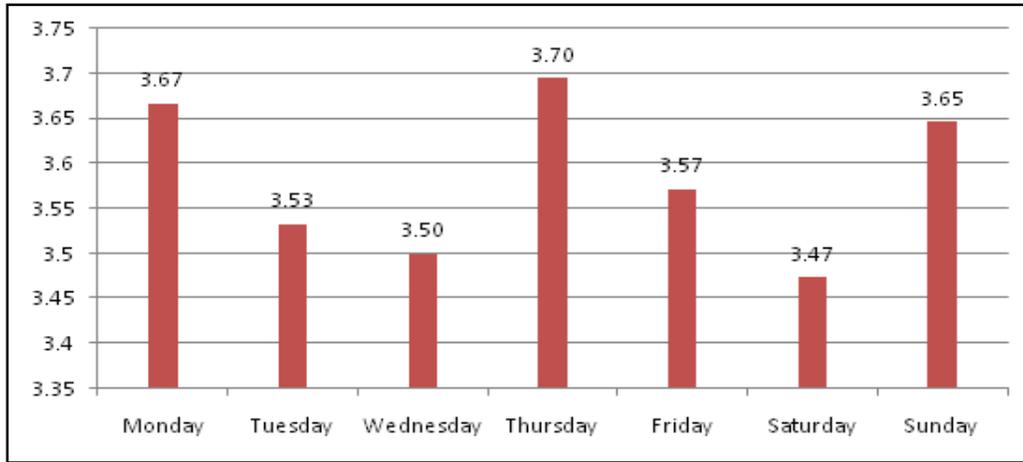


Figure No.11: The distribution of mean OS among the days of the week

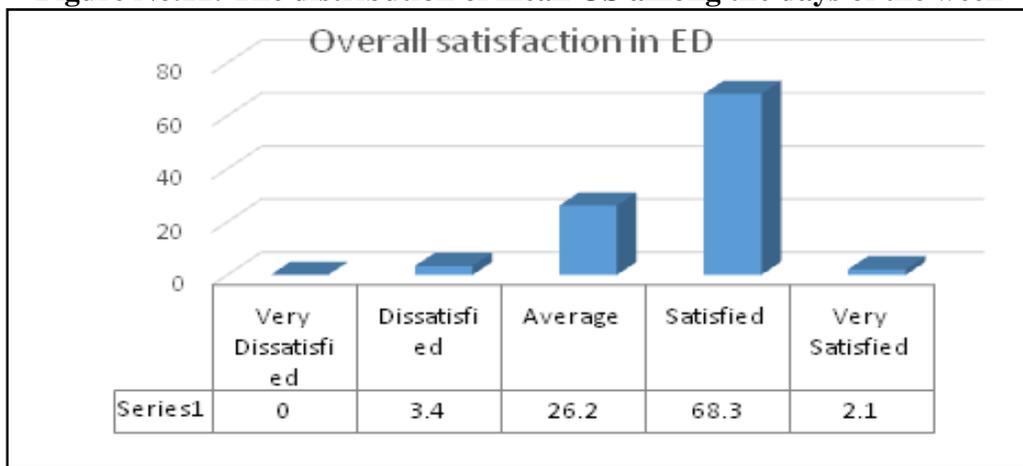


Figure No.12: The overall satisfaction towards ED

**CONCLUSION**

This study provides about the level of satisfaction of adult clients at emergency department of Orotta National Referral Hospital. The finding of this study indicates that more than half of the participants were satisfied with the overall service given to emergency clients on various fields such as the waiting time, physician care, nursing care, courtesy of staff, total information provided regarding patients condition, medication provided, follow up care and condition of the environment including, physical comfort, cleanliness of the department. Clients show high level of satisfaction on overall the care received from this department [70.2%]. Whereas clients were dissatisfied with the information provided by the health professionals mainly on information about what to do at home [58%], about prognosis of the disease [51.7%] and follow up care [51%]. On the

questions related to the environmental condition clients are satisfied except to the cleanliness of the toilet in which only 20.7% of the respondents were satisfied. The result of our study indicate that the age, level of literacy, number of visit, time of visit, day of visit, and mode of entry have an effect on clients satisfaction as indicated in the result and discussion. Those who were visited at the night shift shows higher level of satisfaction as compared to the other shifts. Those who visited the ED previously showed higher rate of satisfaction [85.1%].

**ACKNOWLEDGEMENT**

The authors wish to express their sincere gratitude to Department of Nursing, Asmara College of Health Sciences, Asmara, Eritrea, North East, Africa for providing necessary facilities to carry out this research work.

## CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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**Please cite this article in press as:** Linto M Thomas et al., Assessment of client satisfaction in adult emergency department of Orotta National Referral Hospital, Asmara, Eritrea, *International Journal of Medicine and Health Profession Research*, 2(2), 2015, 94 - 110.