MERIT RESEARCH JOURNALS
www.meritresearchjournals.org

Merit Research Journal of Medicine and Medical Sciences (ISSN: 2354-323X) Vol. 8(9) pp. 497-507, September, 2020
Available online http://www.meritresearchjournals.org/mms/index.htm

DOI: 10.5281/zenodo.4049936

Original Research Article

Care-Givers' Perceptions to the Quality of Healthcare and Services Delivery in the Pediatric Ward of the Bamenda Regional Hospital-Cameroon

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Abstract

This study aimed to evaluate health service quality in the pediatric ward of the Bamenda Regional Hospital (BRH), Cameroon, with the aim of finding out parents'/care-givers' perceptions of healthcare service quality offered in the pediatric ward and to determine the predictors of service quality in terms of I-PAHC instrument service quality dimensions. The five dimensions considered in this study were nurses' attitude, doctors' attitude, pain management, ward/environmental hygiene and information communication. A cross-sectional study design was employed. The study was restricted to a sample population from the in-patient care of the pediatric ward in the BRH, Cameroon. The study's questionnaires were completed by 78 parents/care-givers of hospitalized children to determine their perceptions to the quality of healthcare services in this ward. The data were computed into SPSS 20.0 and analyzed using univariate and linear regression model analysis. The results showed both positive and significant relationships among the service quality dimensions. The most significant correlation was between perceived quality of healthcare services and nurses' attitude. The univariate analysis showed that 41(51.3%) of the respondents said the healthcare quality in the pediatric ward was averagely good, 35(43.8%) of them were very pleased with the quality of healthcare services delivered to their children, and 62(77.5%) of them said they would recommend the pediatric ward to others. The results of the linear regression model indicated that only nurses' attitude and pain management were significant predictors for healthcare service quality in the pediatric ward. These findings present several measurement implications of service quality in healthcare. Due to the correlation between clients' perceptions to the quality of healthcare services and the dimensions of clients' satisfaction, the outcome of this study is important for administrative measures in assessing service quality in hospitals.

Keywords: Quality healthcare service, Pediatric ward, Parents'/careers' perception, clients' satisfaction

INTRODUCTION

Quality is increasingly becoming a major part of the human life. Continuously, individuals are in a search for excellent goods and services. Hence, this craving for excellence has instigated a global consideration for quality as an important objective to attain competitive benefits among the providers of these goods and

services (Mosadeghrad, 2013). To this effect, the World Health Organization (WHO) has quality on its action plan for the global development and strengthening of healthcare systems. Hence, one of the WHO's health system's building blocks is to deliver health services that are effective, safe and of good quality to those who need them (WHO, 2007).

In previous years, there was no pressing need to set-up excellence in the delivery of public healthcare services especially in Africa. But now public healthcare services are faced with increasing competition from the private sector and the intensifying expectations of clients who are more aware of what they need and what is available in the healthcare sector (Peprah, 2014). Moreover, with respect to excellence in the delivery of healthcare services, the health outcomes in advanced nations have increasingly inspired emerging countries to appraise the quality of their healthcare systems with focus on health outcomes status and clients' satisfaction as vital measures of quality healthcare (Adjei, 2015). Owing to the significance in these service gaps, emerging countries are laying emphasis on increasing the availability of healthcare goods and services while maintaining satisfactory quality standards (Srivastava et al., 2015). Regardless of the range of advancement in health sector initiatives, the excellence of care conveyed remains open to questionsas different hospitals provide the same type of services, but at different quality levels (Adjei, 2015). The WHO (2006) asserted that even in areas where the healthcare systems are well advanced and resourced, evidently, excellence in healthcare delivery has remained a call for concern, with anticipated results not predictably realized and with extensive differences in the standards of healthcare delivery within and between healthcare systems. A healthier population can be achieved by improving healthcare quality but unfortunately many health strategies worldwide are not considering the issues of assessing and improving the quality of healthcare services especially in low resource settings. Hence, efforts to strengthen the health system without continuous quality improvement are said to be useless (Nambiar, Hargreaves, Morroni, Heys, Crowe et al, 2017).

Many developing countries such as,Cameroon, for instance, which bears about one third of the world's disease burden (Njini, 2012), and is faced with high mortality rates of all ages especially amongst children (UNICEF, 2016), failed to meet up with the Millennium Development Goals (MDGs) health sector target objectives by 2015. Cameroon only achieved 30% reduction in the under-5 mortality rate which was 37% points away from the targeted 67% between 1990 and 2013 (Njimanted et al., 2017). At this rate, the Sustainable Development Goal (SDG) 3.2 objective of reducing under-5 mortality to as least 25 deaths/1000 live births might not be achieved by 2030 Chelo et al (2016). In addition, Cameroon has a doctor- patient ratio of 1:50,000 residents in the countryside, for a population of about 25 million with a daily increase of refugees in the country, this is quite low compared to the WHO recommendation doctor-patient ratio of 1: 10,000 residents (Kindzeka, 2018), and it is a challenge to the quality of healthcare service delivery in Cameroon. Despite the numerous government reforms to bring public healthcare to the population, only a few regions within the country can boast of an extensive healthcare coverage. Access to healthcare services is an aspect of excellence in healthcare delivery that has remained limited in Cameroon because of the poor or non-existent of health infrastructures for many people living outside the main cities and in areas where these services are available, they tend to be very expensive to purchase (Shu, 2010). Considering the public health expenditure data for Cameroon, between 1990 and 2015, as a proportion of the Gross Domestic Product, Cameroon had an average of only about 5% of its total expenditure on health (World Health Statistics, 2015), which is far less that the Abuja declaration of at least 15% of a nation's yearly budget to advance the health sector. This accounts for limited healthcare resources been tailored towards priority areas hence, jeopardizing the quality of some healthcare services delivery in the country.

Mosadeghrad (2013) stated that quality healthcare is "steadily providing the patient with effective, current and well-organized healthcare services in accordance to the latest medical guiding principle and values, meeting the patient's needs, expectations and providers' satisfactions". This definition stresses on the importance of patient's role in the determination of what quality healthcare means. Unfortunately, owing to the vagueness in the definition and individual's relative preferences, it is hard to measure the real excellence of healthcare services from patient's perspective (Baidoo et al., 2016). To this effect, patients' perceptions to the quality in healthcare services rendered are important to ensure patients satisfaction. Globally, quality in health service has been a call for concern to both private and public healthcare institutions with greater focus on patient-centered care, the determinants of quality services and how this can be measured (Upadhyai et al., 2019).

In spite of the recent global accumulation of knowledge and experiences in enhancing excellence in healthcare services, policy-makers around the globe are frequently faced with the problem of which quality strategies complemented with current planned initiatives would have the utmost effect on the health outcome of the population in question (WHO, 2006). To this perspective, this study will contribute to the current literature on clients' perceptions to the quality of healthcare services as follows; Unlike preceding studies for instance; Adjei (2015), Shu (2010), Baidoo et al. (2016) and (Rios-Zertuche et al., (2019), which considered a combined study population of both in and out patients, a mix of adults and children and used the

SERVQUAL tool which was originally designed for the retail sector and has been shown to have limited convergent and construct validity (Babakus and Boller, 1992), or build a tool for data collection based on other quality indicators, this study analyzes parents'/care-givers' perceptions to the quality of healthcare services rendered to in-patients only in the pediatric ward of the BRH-

Cameroon and uses the In-Patient Assessment of Healthcare (I-PAHC) quality instrument for data collection. Secondly, unlike Fonyuy and Wayih (2019) who utilized the quality indicators for In-Patient Assessment of Healthcare (I-PAHC) and Out-Patient Assessment of Healthcare (O-PAHC) services experience constructed by Webster, Mantopoulos, Jackson, Cole-Lewis, Kidane et al (2011) for assessing patients experiences in low income settings to study patients perception to health service quality using a population of both in/out patients, adults and children in the BRH of Cameroon, this current study differs in that it considers only in-patient children as the study population. Hence, this study aims at investigating parent's/care-giver's perceptions to the quality of healthcare services delivered in the pediatric ward of the BRH with an understanding to inform policy on the ways of improving healthcare quality in this department to increase the chances of child survival. In this light, the study hypothesis that i) the quality of healthcare services delivered in the pediatric ward of the BRH is in compliance with the expectations of I-PAHC quality standard for healthcare service delivery. ii) Services users are satisfy with the quality of healthcare services delivered in the pediatric ward of the BRH.

The remaining parts of this study are structured as follows: section 2; conceptual and empirical literature, section 3; methodology, theoretical framework, data collection methods, section 4; presentation and discussions of results, limitation to the study and section 5; conclusion and recommendation for policy.

Conceptual Literature

To undertake any initiative of raising quality standards for healthcare services and outcomes in health systems, it is vital to initially understand what 'quality' means. For lack of this understanding, would be practically impossible to plan activities and procedures used to advance health outcomes (WHO, 2006). The word "quality" is from "qualis", a Latin word signifying "what kind of". As defined by the Merriam-Webster Dictionary (2010), quality is "The degree of brilliance; superiority of a kind; and a unique quality". It is challenging to define "quality", because of its individualistic and untouchable characteristics. It is a vague and abstract concept with many meanings and explanations (Shu, 2010). Hence the definitions of quality differ depending on the context and from what perspective it is considered.

With respect to quality in healthcare, the Institute of Medicine (1990A) describes quality healthcare as the extent to which personal and population health services raise the chances of anticipated health results and are steadfast with present proficient knowledge. (Atinga, Nkrumah, Domfeh, 2011), differentiated clinical quality from service quality. To them, service quality signifies the various determinant indicators of services users' experiences such as hospital comfort, support from providers, waiting time, appointment visits and the physical environment of the facility. But the WHO (2006) adopted a more standard definition for quality healthcare as; healthcare that is effective, efficient, accessible, acceptable/patient-centered, equitable and safe. Further in 2011, Webster, Mantopoulos, Jackson, Cole-Lewis, Kidane et al, used various healthcare quality determinants and constructed an in-patient/out-patient quality assessment questionnaire which they used in low-income settings. In an attempt to appraise the definition of quality healthcare by some authors; Mosadeghrad (2013) defined quality as "conformance to specification", Baidoo, Asare-Kumi, Nortey, Kodom, (2016) defined healthcare quality as the extent to which personal and population healthcare services raise the probability of anticipated health results and are steady with recent expertise knowledge. In our context, from service users' perceptive, an understanding of quality healthcare service delivery is challenging because of the multi-dimensional and very complex nature of quality (Peet & Okeke, 2019). Globally, different health systems often face similar challenges in delivering high quality care but the degree and mechanisms through which these challenges affect quality improvement interventions may differ in poor resource settings (Nambiar, Hargreaves, Morroni, Heys, Crowe et al, 2017).

Service quality and Clients' satisfaction

Clients' (patients') satisfaction is an important quality dimension and key indicator of the healthcare industry which is fundamentally a service base industry (Rafidah, Nurulhuda and Suhaila, 2017). Caruana et al. (2000), asserted that, globally, client satisfaction or dissatisfaction (an experience with a service quality) and service quality (an antecedent to clients' satisfaction) are distinct but closely related concepts that affect all organization. Accordingly, the clients can appraise a good or a service only after they use it. Therefore, satisfaction is the after-purchase assessment of products or services given the expectations before purchase (Yogesh and Satyanarayana, 2012). When consumers are contented with a good or a service, they are more prone to return or recommend the service. Customer satisfaction is an essential aspect for loyalty but there is no certainty that fulfilled clients will become faithful ones.

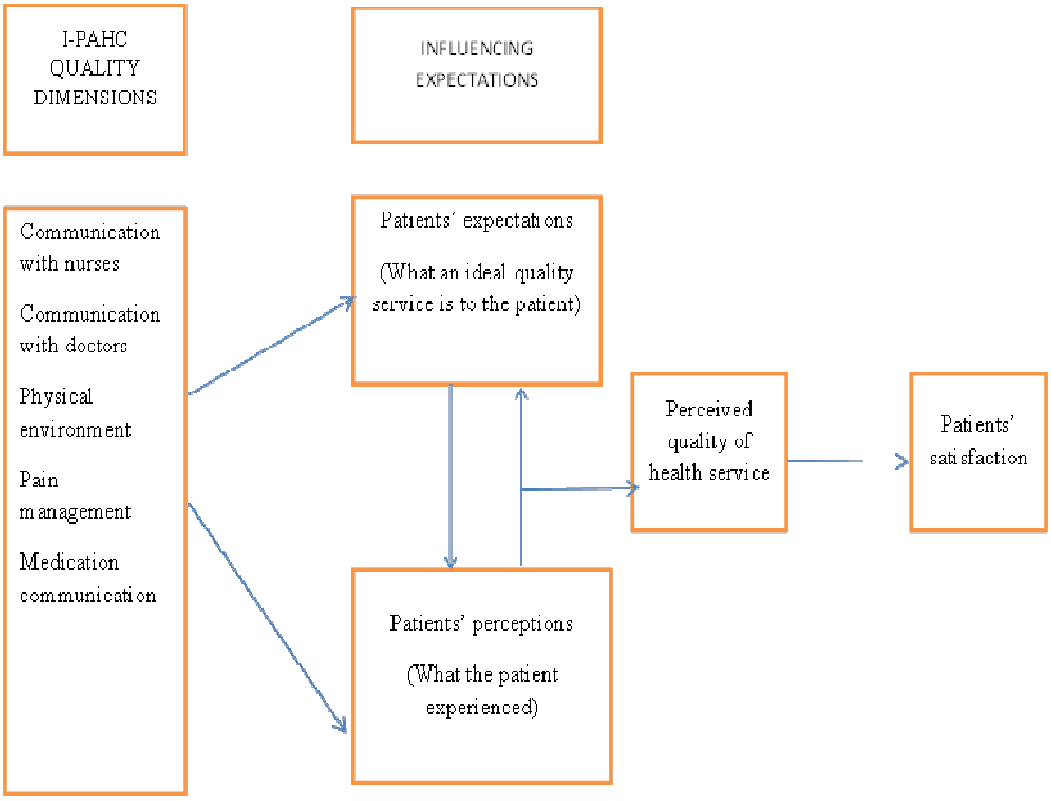

FIgure 1. Source: Adopted and modified from Panteloukas, Asopo, and Buwag (2012) using the quality dimension of the I-PAHC instrument constructed by Webster, Mantopoulos, Jackson, Cole-Lewis, Kidane et al (2011).

Researchers have anticipated that fulfillment is a requirement, but not enough for repurchasing or recommendation. This is because satisfied customers could turn to other service providers whom they believe are offering them better value and quality (Tabaku and Kushi, 2013).

Conceptual Framework

In the healthcare sector, clients' satisfaction is quality dependent. Although the quality of healthcare service delivery and clients' satisfaction are difficult to measure, it can be operationalized using different disciplinary methods that combine service users' inputs and professional judgment (Naidu, 2009). In the quest by clients to assess the quality of healthcare service delivery, it should be noted that perceptions to service quality is an attribute, which is a function of some combinations of several attributes loaded on unique dimensions which a client considers to be components of quality (Aduo-Adjei 2015). It is more effective to measure healthcare quality taking into consideration all the vital meanings of the concept of quality healthcare than only one of these dimensions. But for the purposed of this study, the conceptual framework is adopted and modified from the I-PAHC instrument quality questionnaire for assessing in-patient's healthcare experiences in low-income resource settings constructed by Webster, Mantopoulos, Jackson, Cole-Lewis, Kidane et al (2011).

The conceptual model below shows that patients' quality perceptions are influenced by gaps between their expectations before using the services and their experiences while using the services. Patients' satisfaction depends on the perceived quality of the healthcare service received. This frame work permits both investigators and legislators to conceptualize service users' experience and perceptions to the quality of healthcare services in the pediatric ward of the BRH. Figure 1

Empirical literature

Traditionally, healthcare was seen as a denomination with power solely in the hands of healthcare providers, especially physicians, who had and still have the significant ability to determine what type and dimensions of services will be provided, to whom, in which settings and facilities (Sofaer and Firminger, 2005). Recently, there is an increasing interest in the value of healthcare services from service users and patients' perspectives.

From this viewpoint, several researchers have done work with respect to clients' perceptions to the quality of healthcare services rendered by providers. These include;

Shu (2010) compared the level of service quality provided by public and private hospitals in the North West Region of Cameroon, using the SERVQUAL instrument to collect information from a total of 244 hospital users in Cameroon. The results showed that the clients' expectations from both types of hospitals were low and there were no differences between public and private hospital users in relation to their selection factors. Using an independent t-test and Pearson correlation analysis, a significant relationship was found between service quality dimensions and the overall customers' satisfaction. A positive significant relationship also existed between overall customers' satisfaction, loyalty and positive word of mouth. Further, no significant correlation existed between the overall service users' satisfaction, the age, gender and income levels of clients. However, there was a significant correlation between the overall clients' satisfaction and the departments which the clients used at the hospitals. There was also an overall dissatisfaction with both clients who can and those who cannot afford healthcare in Cameroon.

Adjei (2015) modified and used the SERVQUAL instrument for data collection which was administered to 218 sampled patients receiving healthcare at the out-patient department of two university teaching hospitals in Ghana and did a comparative analysis of the two hospitals. The data was analyzed by running a principal component analysis, multiple linear regression, independent test and a manual thematic analysis. The results showed that, empathy, communication, culture, tangibles and priority were key predictors of patients' satisfaction with quality healthcare even though these dimensions of service quality differed in healthcare delivery at the two-university hospitals.

Baidoo, Asare-Kum, Nortey, Kodom (2016) adopted a combination of the SERVQUAL category methodology and profile analysis over a 7th systematic random sampling of out and in-patients' perceptions to healthcare quality received, collecting data over a two week period at the university of Ghana teaching hospital. Data collected from 100 participants was analyzed using profile analysis. From the SERVQUAL methodology, the results showed that empathy was the most important indicator of quality to the patients. Nevertheless, empathy obtainable at this hospital had the lowest scores (-25). Tangibles received maximum scores (although negative) when the five dimensions are compared. Results from the profile analysis showed no significant effect of the various dimensions of service quality. Indicating that, the perceptions of both sets of patients (in/out) do not change over the dimensions of service quality.

Rios-Zertuche et al. (2019), constructed a quality indicators' questionnaire for maternal, neonatal and child care to evaluate the quality of medical care in low- and middle-income countries. This questionnaire was constructed using a check-list from a quality improvement initiative as an initial framework, and reviewing clinical guidelines, and consulted expert obstetricians and pediatricians from the region to select a subset of criteria for critical processes of care. Data was collected from 12,662 medical archives in the poorest locations of Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama and the state of Chiapas in Mexico from January to October 2014. The percentile analytical results showed differences in the quality of care amongst and inside countries. Monotonous interventions, such as excellence antenatal care (ANC), instant newborn care and postnatal contraception had low compliance levels. Records in compliance with quality ANC ranged from 68.8% [CI: 64.5–72.9] in Costa Rica to 5.7% [CI: 4.0–8.0] in Guatemala. Fewer than 25% of complications from obstetric and neonatal consultations were managed in accordance to the standards in all the countries.

Fonyuy and Wayih (2019) in assessing patients' experiences as a measure of the quality of care rendered in the Bamenda Regional Hospital-Cameroon used the PAHC instrument for in and out patients to collect cross-sectional survey data from 175 patients and analyzed the data using regression analysis of SPSS version 20. The result of this study showed that the quality of care rendered to majority of patients met their needs and expectations to a greater positive extent with 32% respondents rating the hospital in minimum global satisfaction of between 0–6, 44% rated it as moderate global satisfaction between 7–8 and 24% rated it high global satisfaction between 9–10 on a scale of 0–10.

As far as service to the public is concerned, the customer factor remains immortal to the agenda of organizations because the only one purpose for which all businesses exist is to serve the customer and serious errors are likely to occur if organizations attempt to achieve quality without a comprehensive understanding of the requirements and expectations of customers (Atinga et al., 2011).

METHODOLOGY

This study used a cross-sectional data collection method, adopting and modifying the I-PAHC instrument for assessing patients experience for healthcare for low income countries.

Study Area

This study was conducted in the pediatric ward of the Bamenda Regional Hospital (BRH) which is located in the Azire Health Area of the Bamenda Health District in the North West Region of Cameroon. BRH is the biggest

healthcare facility in the region and a tertiary referral hospital that serves a population of about 2, 180, 308 inhabitants with a 400 bed capacity and about 440 workers. The BRH receives about 150 patients daily with about one-third being children. Children visiting this hospital profit from the Expanded Program on Immunization which offers many vaccines for various ages such as: the influenza vaccine, pneumococcal vaccine and the measles vaccines (Tazinya et al., 2018). In accordance with the Cameroon health system policy, it is a referral point for an estimated 20% of all the health challenges in the region, leading to a target population of about 442,526 residents. In 2017 the hospital had about 14214 admissions with a bed occupancy rate of 83% and an average length of 5.1 days stay by patients in the hospital (BRH, 2018).

The pediatric unit

The pediatric component of the BRH is made up of an HIV treatment center where children in care visit for a monthly refill of their medication, a diabetic clinic for children, a mini-laboratory and a pediatric ward to accommodate children upon admission. The pediatric ward is divided into four sections of; a semi private of 5 bed spaces, two general wards of 9 bed spaces each and an intensive care section of 6 bed spaces. Its occupancy level is more than 85% most times of the year and health services in this unit are provided by 3 general practitioners and 11 nurses. In 2019, the total numbers of admissions in the pediatric ward were 5,086 children with an average monthly admission of 102 children (BRH, 2019).

Study population

The study population comprises of parents/care-givers of hospitalized children who have received care within a least 2days (48 hours) of hospitalization at the time of the study and had been discharged and gave their approval to partake in the study.

Inclusion criteria

Parents/care-givers of children who had been hospitalized for at least 48 hours and moreand have been discharged.

Study design

This study employed a cross-sectional self-administered questionnaire method to parents/care-givers of discharged children, every Tuesdays of the week taking into consideration that the average hospitalization day in the pediatric ward is 7days. Parents/care-givers of in-patients who had received care in the pediatric ward of the BRH were conveniently asked to obtain their experiences as a measure of assessing the quality of care rendered in this unit. The findings were evaluated with respect to the objectives of this study.

Sample size determination

The sample size for this study was calculated using Yamane formula (1967;n=N/ (1+N (e) ^{2})
Where n= sample size, N= the average monthly admission recorded in the pediatric ward in 2019, e= level of precision. For this study, e= 0.05.
From the 2019 records, the average monthly hospitalization was 101 children
Hence the sample size for this study n=101/ (1+101(0.05)^2) = 80.6
So 81 children where sampled in this study

Data collection tool and data collection method

The data collection tool was a self-administered questionnaire adopted and modified from the I-PAHC instrument whose reliability and validity had been tested in Ethiopia (Webster et al., 2011), a low-income country like Cameroon, and found to be appropriate and feasible to administer.

The questionnaire for this study consisted of 17 questions, divided into 5 sections, covering patients' demographics, respondent's knowledge of quality healthcare, respondent's perceptions to the quality of care received, satisfaction level and recommendations. In addition, the questionnaire gave room for an overall evaluation of clients' satisfaction level with the quality of care, which was measured by a single survey question that asked parents/care-givers to rate their overall satisfaction with the quality of services they had received in the ward. The scale used a ranged with 1 for "very satisfied" and 3 for "not satisfied".

The data for this study was collected once weekly over a period of two months (In the months of April and May 2020). This study received its ethical approvals from the ethical committee of the Regional Delegation of Public Health for the North West and ethical committee of the Bamenda Regional Hospital-Cameroon.

Variables and Their Measurements

The outcome variable for this study was the parents/care-givers' perception to the quality of healthcare services delivered to children in the pediatric ward of the BRH. Parents/care-givers' overall perception to the quality of

healthcare is a categorical variable assuming '1' for best quality of care and '4' for very bad quality of care. The variables utilized were respondents' knowledge onquality of care, parents/care-giver's perceptions to the different dimensions of quality healthcare, user's satisfaction level and recommendation.

Estimation techniques

The data for this study was computed into SPSS version 20.0 and analyzed using a linear regression analysis at a 0.05 significance level to calculate the correlation between the overall quality ratings of the ward service and the dimensions of care.

Theoretical Framework

The study adopted and modified a theoretical framework from Raftopoulos (2005) who proposed an integrative model for elderly patients' perceptions and satisfactions to certain quality dimensions of healthcare services they received. This model incorporated key variables such as perceived quality of healthcare services and patients' satisfaction. Hence, there were two basic models for this study.

PSQ= f(X)……1(a)
Where PSQ; perceived service quality and X; the different dimensions of quality healthcare service. Hence for this study, equation 1(a) will be
PSQ= f (Nurses attitude (NA), Doctorsattitude (DA), Physical environment (PE), Pain management (PM), Medication communication (MC),
PSQ= f (NA, DA, PE, PM, MC)……1(a)
As earlier said service quality is an antecedent to patients' satisfaction. Hence the second basic equation for this study was: CS= f (PSQ)……1(b)
Where CS: clients' satisfaction
Hence putting equation 1(a) and 1(b) in an estimable form,
$PSQ= \beta_0+\beta_1 NA+\beta_2 DA+\beta_3 PE+\beta_4 PM+\beta_5 MC + \mu_0$……..2(a)
Apriori expectations; $\beta_0 <$ or > 0, $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 > 0$
$CS=\beta_0 + \beta_1 PSQ + \mu_0$……2(b)

PRESENTATION AND DISCUSSIONS OF RESULTS

The univariate analysis showed the following results; 81 respondents participated in the study, with an overall responds rate of 96.3%(78 respondents), of which 67(83.8%) were parents to the children, 41(51.3%) of the children were male, 46(57.5%) of these children were 5years and below, 45(56.3%) were of urban residence, and 52(65%) of these children had stayed 2-5 days in the hospital.

Of the 78 respondents, 29(36.3%) had very little familiarity with the concept of quality healthcare, a majority of them, 28(36% or 35.9%) had heard of quality healthcare from a health facility and most of them, 23(28.8%) said that safe and effective treatment was the most important aspect of quality healthcare, 38(47.548.7%) said nurses' attitude was very good, 63(78.8%) said doctors' attitude was very good, 40(50%51.3%) said the ward/environmental hygiene was very clean, 46(57.5%) said the ward was sometimes quiet at night and mostly the noise came from the children. 63(78.8%) of respondent said that the level of privacy is excellent, 43(53.8%) said their children's pain were very well managed, 35(43.8%) said information on the possible side effects of the medication administered to their children were never communicated to them. Finally, 41(51.3%) of the respondents perceived healthcare quality in this pediatric ward to be averagely good, 35(43.8%) of them were very contented with the quality of healthcare delivered to their children, and 62(77.5%) of them said they would recommend this pediatric ward to others.

In line with the objectives of this study, the tables below represent a summary of the linear regression analysis.

Table 1, shows the association between the perceived quality of healthcare and the service quality dimensions which comprises of both negative and positive relationships. The most significant of the relationship is between perceived quality of healthcare and nurses' attitude which is strongly positively related at 60% and perceived quality of care and medication information which is weakly positively related at 7.8%. This relationship between nurses' behavior and clients' perceptions to health service quality is in line with the study of Mendozal, Piechulek and al-Sabir (2001) in Bangladesh who found that providers behavior particularly respect and politeness in government services was more important that technical competence of providers.

From table 2a below, it shows that if all other healthcare quality dimensions variables are held constant, the quality of healthcare would reduce by a $ß_0$ value of -.134. Meaning a -13.4% change in the quality of healthcare services delivered. A $ß_1$ value of 0.49 for nursesbehavior means, a 1% change in the nurses' behavior will cause a 49.0% change in the quality of healthcare service holding all other independent variables constant. A $ß_2$ value of 0.279 for doctors' behavior means a 1% change in doctors' behavior will cause a 27.9% change in the quality of healthcare service delivered. A $ß_3$ value of 0.084 for ward/environmental hygiene means a 1% increase in ward hygiene will lead to an 8.4% change in the quality of healthcare service delivered. A $ß_4$ value of 0.147 for ward's quietness means a 1% change in the quietness at night will lead to a 14.7% change in the

Table 1. Relationship between the perceived quality of healthcare and the service quality dimensions

	PQ Healthcare	Nur. Attitude	Doc. Attitude	Ward/env't Hygiene	Quietness	Pain Mang't	Med info
PQHealthcare	1.000	0.606	0.407	0.333	0.133	0.368	0.078
Nur.attitude	0.606	1.000	0.363	0.437	-0.086	0.219	-0.049
Doc. Attitude	0.407	0.363	1.000	0.155	0.163	0.166	-0.102
Ward/env't hygiene	0.333	0.437	0.155	1.000	0.023	0.176	-0.107
Quietness	0.133	-0.086	0.163	0.023	1.000	0.053	0.132
Pain Mang't	0.368	0.219	0.166	0.176	0.053	1.000	0.171
Med info	0.078	-0.049	-0.102	-.107	0.132	0.171	1.000

Source: Authors' computation from SPSS 2.0

Table 2a. An analysis of parents/care-givers perceptions to the hc service quality dimensions healthcare

Model	Unstandardized	Coefficients	Standardized Coefficients	T	significance
	B	STANDARD ERROR	BETA		
1 (constant)	-.134	321		-.418	.667
Nurses'attitude	.490	.104	.484	4.697	.000
Doctors'attitude	.279	.150	.176	1.852	.068
Ward hygiene	.084	.126	.064	.665	.508
Quietness	.147	.106	.124	1.389	.169
Pain management	.121	.054	.203	2.246	.028
Medication info	.060	.070	.076	.855	.395

Dependent variable; quality of healthcare
Source: authors' computation on SPSS version 2.0

Table 2b. Model Summary

Model	R	R^2	Adjusted R^2	Std error of the estimate	Significant F change
1	.695[a]	.483	.439	.493	.000

Predictors: (constant), Med.info, NA, Quietness, Pain management, DA, Ward hygiene
Source; authors' computation on SPSS version 2.0

Table 3a. Regression analysis of quality healthcare as function of parents'/careers' satisfaction to healthcare service delivery

Model	Unstandardized	Coefficient	Standardized	T	Sign
	B	Standard error	BETA		
Constant	0.157	0.139		1.128	0.263
Perceived quality of care	0.903	0.075	0.806	12.044	0.000

Dependent variable; Patients/careers' satisfaction
Source: author computation on SPSS 2.0

Table 3b. Model summary for the regression analysis of patients' satisfaction as a function of perceived quality of healthcare

Model	R	R-square	Adjusted R^2	Std error of estimate	Significant F change
1	0.806[a]	0.650	0.646	0.432	0.000

Predictor; (constant) perceived quality of care
Source; Authors computation

quality healthcare. A $ß_5$ value of 0.121 for pain management means a 1% change in pain management will lead to a 12% change in the quality healthcare service delivered. A $ß_6$ value of 0.060 for medication

information means a 1% change in medication communication will lead to a 6% change in the quality of healthcare services delivered.

The values for $ß_1$, $ß_2$ $ß_3$ $ß_4$ $ß_5$and $ß_6$ are > than 0 which is in line with the apriorism expectations. The regression analysis showed that only the nurses' behavior is a significant (0.000) predictor to service quality delivery in the pediatric ward. This is against the study of Solheim and Garratt (2013) that used ordinary least squares regression analysis and showed that child pain management and medication information were significant predictors to with at quality healthcare using a least five quality dimensions of the Parents Experiences of Pediatric Care (PEPC) scale in Norway.

The R^2 value of 0.483 means that 48.3% of the variation in parents/care-givers perceptions in quality of healthcare services in the pediatric ward can be explained by the healthcare service quality dimensions. The combined effect of the quality indicators was significant to the quality of healthcare service delivery in the pediatric ward.

From table 3a above, the value $\beta_0 = 0.157$ means that if perceived quality of care is held constant patients' satisfaction will change at 15.7%. A β_1 value of 0.903 for perceived quality of care means that a 1% change in parents/careers perception to quality healthcare will result to a 90.3% change in patients'/careers' satisfaction. The perceived quality of care was highly significant (0.000) to patients'/careers' satisfaction with healthcare delivery in the pediatric ward. This is in line with the study of Shu (2010) who found a significant relationship between service quality and overall customers' satisfaction in the North West Region of Cameroon and Alrubaiee and Alkaa'ida (2011) who showed that patient's perception of healthcare quality had a positive and direct effect on patient satisfaction.

From table 3b above, the R2 value of 0.650 means 65% of the variation in patients/care-givers satisfaction is as a result of the patients'/careers' perception to the quality healthcare services and it is a significant a predictor for patients' satisfaction with a significant value of 0.00 at a 95% confidence interval.

Of the 78 respondents, 62(77.5%) said they would recommend the pediatric wards to others. This is in line with Jha et al. (2008) who showed that patients' satisfaction with care was moderately high levels on average and 67.4% of a hospital's patients said they would certainly recommend the hospital in which they had received care in the United States.

Shortcoming

This study encountered several shortcomings. First, the study was limited to the pediatric ward of the Bamenda Regional Hospital hence, the researchers depended on parents/care-givers to transfer key information associated with patients' encounter especially for very young and non-verbal children. Hence, assessing the quality of care from children's perspective possesses many challenges not encountered when dealing with adults. Secondly, the data was collected in a cross-sectional design. Hence there was no follow-up data which allow perfect conclusions regarding the perceptions and satisfaction to the quality of care

CONCLUSION AND RECOMMENDATIONS

Conclusion

Although majority of the service users' were satisfied with the quality of care delivered in the pediatric ward of BRH and would recommend this ward to others, the quality of healthcare servicesdelivered in the pediatric ward of the BRH is not in complete compliance with the expectations of I-PAHC instrument. Hence, the need for continuous improvement of quality in the provision of healthcare to satisfy patients' is self-evident. Service users' insights of service quality have proven to be a vital aspect in assessing the quality of health services in the pediatric ward. Hence, healthcare service quality warrants paramount importance in ensuring patients' satisfaction with care and maintaining institutional reputation.

Recommendation

To begin making improvements in the quality of healthcare services, there is need to first have an understanding of how quality is measured and the opportunities that exist for improvement, and then we can establish a starting point. In this perspective, the following recommendations could be made from this study

- Hospital management should ensure that efforts on patients' safety and health outcomes, efficient and care coordination should be undertaken by healthcare providers who are in direct contact with the patients.
- Stake holders and policy makers should re-design healthcare initiatives and ensure there are being evaluated to monitor future improvements in healthcare quality.
- Healthcare administrators should create an internal quality control team for their intuitions. This team should be balanced and have an executable plan of action.
- Individuals and healthcare managers should encourage continuous learning and in cooperate best practices to improve the quality of healthcare delivered in their institutions
- Further work is needed to determine the extent, to which differences in parents' /care-givers' perception are due to differences across providers,

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