

## **Assessment of patient satisfaction from health services: A survey at a teaching hospital in Papua New Guinea**

Jerzy Kuzma  
Iwona Kolodziejczyk

### **Abstract**

The study reported here evaluates patient satisfaction with the quality of health care provided at the Modilon General Hospital, Madang, Papua New Guinea (PNG). A total of 92 patients from different wards were interviewed and aspects of patient satisfaction were graded with Likert type scales.

The majority of participants were satisfied with the staff attitude, viewing it as friendly and good, and patients were happy in general terms with the services received in the hospital. Against this, only just over half of the patients were satisfied with how doctors communicated their diagnoses and explained their treatment to them. The study demonstrated that despite limited resources in tertiary health services in PNG, further cost-effective improvement of health care provision could be achieved by focusing on improvement in quality of care.

**Keywords:** patient satisfaction, quality of care, tertiary health services, low-income country

### **Introduction**

Recent attention has been focused on quality of health care as a key factor to augment the effectiveness of the health system in low and middle income countries. Among other indicators of quality in health care provision, patient satisfaction has been recognized as an important indicator (Baltussen, Haddad, & Sauerborn, 2002; Shrestha, Dosh, Rao, & Sequeira, 2008). In addition, understanding populations' perception of quality care is vital to the utilization of health care services. Baltussen et al. (2002) pointed out that policy makers should value patients' preferences as means to improve the quality of care and thus, potentially, to increase patients' use of care.

Patient satisfaction is the outcome of the relation between a patient's expectation of ideal care and his or her perceptions of factual care received (Messner & Lewis, 1996). The concept of patient satisfaction includes the following dimensions: clinical aspects of care related to the process of diagnosis and treatment, interpersonal aspects such as staff attitude, accessibility/availability, affordability, outcomes, continuity of care, and physical conditions of facilities (Shrestha et al., 2008).

Because of the recognition that patient satisfaction is an important component of health care outcomes, it is frequently integrated into evaluations of overall quality of health services. However, the methodology of assessing patient satisfaction from health services remains underdeveloped in low-income countries. With a move toward patient-centred, holistic care in these countries, the need for structured and continuous assessments of patients' perceptions of the quality of care became evident (Harutyunyan, Demirchyan, Thompson, & Petrosyan, 2010).

In Papua New Guinea (PNG), quality assessment methods for health facilities, including the evaluation of patient satisfaction, have been used in the past (e.g. Garner, Thomson, & Donaldson, 1990). In a recent study by one of us (Kuzma et al., 2012), the recipients of rural health (non-hospital) services were found to be more satisfied with attitude of the health workers than with their performance. However, we are not aware of any recent study on assessing patient satisfaction at hospitals in PNG.

The current study was designed to evaluate patient satisfaction with the quality of health care provided at a hospital level. The secondary aim of this paper is to inform policy-makers about the strengths and weaknesses of the quality of health care in tertiary care facilities in PNG, which can help in defining starting points to improve quality of care.

## Methods

### *Study design*

We used a structured questionnaire to collect the data from the patients at different wards of the hospital. Due to the low English comprehension of the participants this was delivered using an interview format in Tok Pisin (the national lingua franca understood by everyone in the hospital catchment). Previous work (Baltussen et al., 2002; Haddad et al., 1998) informed the survey design, with questions on staff attitudes and performance, rating of services, accessibility, treatment, health education, equipment, and trust towards health workers. We also collected basic socio-demographic data from the participating patients. Some questions graded patients' satisfaction level over a five-point Likert type scale: from 1=very poor to 5=excellent. Patient's acceptance level was graded on a three-point Likert type scale: from 1= not accepted to 3=well accepted.

### *Participants and selection*

Between March and August 2013, after obtaining informed consent<sup>1</sup> and using convenience sampling, 92 participants were recruited for the study (Table 1). The

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<sup>1</sup> Ethical clearance was obtained from the DWU University Research Ethics Committee and Modilon Hospital's Research Review Board. After an explanation of the purpose and nature of the research, those agreeing to participate signed consent forms written in Tok Pisin.

inclusion criteria were: age of 18 or more years, being an in-patient or carer of child inpatient (paediatric ward) and consent to participate in the study. As with most rapid appraisal methods, a major source of bias was using convenience sampling so that extrapolations to other populations might not be entirely appropriate.

<b>Ward</b>	<b>N</b>
Surgical	17
Paediatric (carers of child inpatients)	27
Obstetric	30
Orthopaedic	18
<b>Total</b>	<b>92</b>

**Table 1. Participants by ward**

#### *Data analysis*

Data were analysed using SYSTAT12 program. Scores were expressed as arithmetical means with standard deviations. To compare results between wards, Kruskal-Wallis test was used for baseline demographic characteristics while analysis of variance for scores. p-values of less than 0.05 were deemed significant. Internal consistency of the instrument was measured by Cronbach's Alfa.

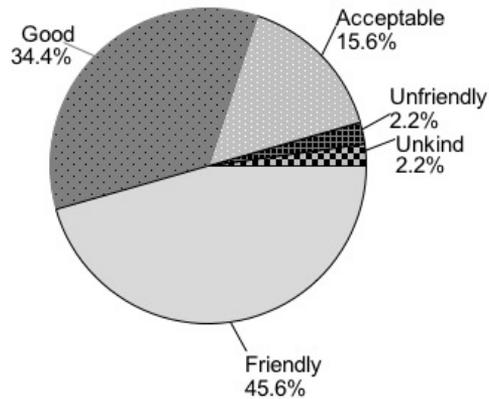
## **Results**

#### *Baseline sample characteristics*

The mean age of the 92 participants was  $28 \pm 8.56$  years and the majority were female (61%; n = 56). The average school grade among the participants was  $8.6 \pm 2.59$  while average length of hospital stay was  $4.7 \pm 2.83$  days. For the majority of respondents, the mean travel time from home to the hospital was less than 2 hours. The participants between particular wards did not significantly differ in terms of their demographic characteristics (Kruskal-Wallis test).

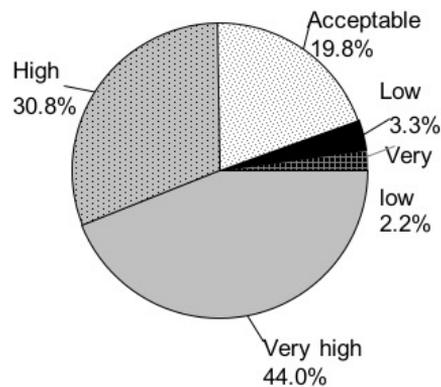
#### *Attitude for the whole hospital*

Generally the patients felt well accepted by the hospital staff with the mean score  $2.8 \pm 0.39$  out of a maximum 3 points for the best acceptance. The difference between the best score,  $2.94 \pm 0.24$ , in the orthopaedic ward, and the worst score,  $2.47 \pm 0.57$ , in the surgical ward was significant at the  $p < 0.01$  level.



**Figure 1. Assessment of the attitude of staff by patients at Modilon Hospital, 2013.**

The majority of patients (80%) were satisfied with the staff attitude viewing it as friendly and good, with the average satisfaction score of  $4.24 \pm 0.94$  out of 5 (Fig. 1). There was a difference between the highest score,  $4.5 \pm 0.44$ , in the orthopaedic ward and the lowest,  $3.76 \pm 1.15$ , in the surgical ward, but it was not significant ( $p= 0.12$ ).



**Figure 2. Assessment of the performance of staff by patients at Modilon Hospital, 2013.**

One third of the patients (9 out of 27) in the paediatric ward were dissatisfied with staff politeness. In contrast, all patients were satisfied with the staff politeness in the obstetric ward.

In the surgical and orthopaedic wards, all patients expressed trust that they would get better in the hospital. Only five parents in the paediatric ward did not think that their

child would get better. Ninety percent of all patients (n=82) were happy with the service received at the hospital. While patient satisfaction from the services varies from 81% in the surgical to 100% in the orthopaedic ward, the differences were not significant ( $p=0.23$ , see Table 1).

The score for overall patient satisfaction on services received in the hospital was  $4.51 \pm 1.44$  out of 5. However, only slightly more than half of the patients were satisfied with how doctors communicated diagnoses and treatment, and explanation of prevention measures. Multivariate analysis showed no differences between wards regarding general patient satisfaction score on the services received and doctors' explanations about the condition and advise on prevention of a particular sickness.

Staff performance was considered good (see Fig. 2) with average patient satisfaction score  $4.11 \pm 0.98$  out of 5. However, the difference between the best score,  $4.57 \pm 0.68$ , in the obstetric ward and the worst score,  $3.76 \pm 1.09$ , in the surgical ward was significant ( $p=0.006$ ).

When asked whether the hospital has appropriate equipment to help the sick, all patients in the orthopaedic ward were satisfied, while about 30% (5 out of 17) of patients in surgical ward were not satisfied, and the differences were significant ( $p=0.008$ ).

Patients' satisfaction score	Surgical ward	Paediatric ward	Obstetric ward	Orthopaedic ward
Acceptance (scale 1-3)	$2.47 \pm 0.51^{**}$	$2.87 \pm 0.34$	$2.89 \pm 0.31$	$2.94 \pm 0.24^{**}$
Staff attitude (scale 1-5)	$3.76 \pm 1.15$	$4.27 \pm 0.83$	$4.33 \pm 0.92$	$4.50 \pm 0.77$
Staff performance (scale 1-5)	$3.76 \pm 1.09^{**}$	$4.04 \pm 1.15^{**}$	$4.57 \pm 0.68^{**}$	$3.78 \pm 0.81^{**}$
Service received (scale 1-5)	$4.35 \pm 0.61$	$4.37 \pm 0.93$	$4.70 \pm 0.60$	$4.56 \pm 0.81$

Notes: means and standard deviations; \*\*  $p < 0.01$  (analysis of variance).

**Table 2 Comparison of patients' satisfaction scores from different aspects of care in various wards of a teaching hospital, Papua New Guinea, 2013.**

## Discussion

We have explored patient satisfaction in a hospital setting, which has not, to our knowledge, been attempted recently in PNG. Research elsewhere shows that assessing patient satisfaction is not only an essential indicator of the quality of health care,

(Baltussen et al., 2002; Shrestha et al., 2008; Garner et al., 1990; Ahmad & Din, 2010), but also, by identifying areas of weakness in the system, it helps to evaluate and adjust health policies, enhancing healthcare delivery in the region (Baltussen et al., 2002; Turkson, 2009; Waitzkin, Schillaci, & Willging, 2008). In this context, Ahmad and Din (2010) emphasized that a patient is the best evaluator. As a direct health care recipient, the patient is one who most accurately identifies the health system's weaknesses and thus provides help in improving the overall quality of health care. Additionally, it is worthwhile highlighting that patient satisfaction plays a crucial role in the acceptance of health services (Kovai, et al., 2010).

When contemplating patient satisfaction from health services provided, one has to understand it as a multidimensional concept. It includes three main components such as the structural, technical and interpersonal aspects of care (Sitzia & Wood, 1997). In this study, 90% of the patients were happy with the service received at the hospital with a very high average satisfaction score. Even though in the surgical ward 30% of participants were dissatisfied with the equipment, the service delivery score was still high (4.35). We also found that the attitude of the staff was regarded as excellent / good by most patients (80%) which may be one of the reasons for a high satisfaction from received services. What we found is supported by Messner and Lewis (1996), who argued that the major part of patient satisfaction is associated with simple human values such as respect, good communication skills, trust, and service adjusted to the patient's personality. They found the following points to be crucial in contributing to patients' satisfaction:

- recognition of individual needs,
  - reassuring presence;
  - provision of information;
  - demonstration of professional knowledge and skills;
  - assistance with pain;
  - amount of time spent; and,
  - promotion of autonomy and surveillance
- (Messner and Lewis, 1996).

Several other studies have indicated that good interpersonal skills, regardless of the resources available to a hospital, strongly influence patient satisfaction scores (Shrestha et al., 2008; Aldana, Piechulek, & al-Sabir, 2001; Smith & Engelbrecht, 2001; Wathek, 2012) and a study from Bangladesh reported that the health staff attitude was far more important than the professional competence of health care providers (Aldana et al., 2001). Against this, studies that have focussed on the technical aspects of services have missed the information about staff attitude and relation with patients (Iliyasu, Abubakar, Lawan, & Gajida 2010; Ofili & Ofowwe, 2005).

Another possible explanation of the observed low correlation between patient satisfaction and resources may be the relatively low educational status of participants. Several authors indicated that the less educated were more likely to be satisfied with the quality of health care provision (Harutyunyan et al., 2010; Quintana, González, & Bilbao, 2006; Selman et al., 2009). Harutyunyan et al (2010) suggested that the less

educated people were, the less they might be expected to know what ideal care should look like and be unable to make informed comparisons. According to Selman et al. (2009) 'low expectations and social desirability seem to play a role here; some service users feel that they should seem grateful for the care they receive, even when their needs are not being met' (p. 9).

In our study the patients generally expressed a high level of trust in health workers (93.5%) such that they believe they will get better in the hospital (or deliver safely in the case of normal pregnancies). However, in the paediatric ward the trust was lowest and associated with the lowest level of politeness towards the participants. The generally high level of trust in health care workers in our study could be another factor influencing generally good patients' satisfaction despite poor technical level of services in the hospital. Similarly, Shabbir, Kaufmann & Shehzad (2010) showed that trust in staff was positively correlated with patient satisfaction. In addition, our suggestions find support in another study which pointed out that the staff interpersonal skills and the trust patients had in staff showed stronger influence on patient satisfaction than the actual quality of medical care (Saultz & Albedaiwi, 2004).

In our study only slightly more than half of the patients were satisfied with the explanation of their condition and instruction about prevention measures received from doctors. Nelson, Wood, Brown, Bronkesh, & Gerbarg (1997) pointed out that good communication and education of patients about their illnesses is a key component of patient satisfaction.

The authors acknowledged as the important limitation of the study is relatively low Cronbach's Alfa (0.6) which indicated that the instrument would need further development to improve internal consistency.

## **Conclusions**

Hospitals are poorly funded in Papua New Guinea, but our study shows that aspects of health care can be improved without additional money by focusing on the quality of interactions between staff and patients. Assessment of patient satisfaction in itself, plays a key role as an indicator of the overall quality of care. Our study is a step towards the development of a proper assessment tool for patient satisfaction in hospitals. We recommend that the assessment methodology be developed further through similar studies at other health service facilities.

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