

# Patient satisfaction with the quality of care in a primary health care setting in Botswana

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## Abstract

**Background:** Primary health care involves a sustained partnership between patients and providers that addresses the majority of a population's health needs over time. Patients' perception of satisfaction is an aspect of healthcare quality that is being increasingly recognised for its importance. The objective of this study was to investigate the factors contributing to patients' satisfaction with and their rating of the quality of care in Extension II Clinic in Gaborone, Botswana.

**Method:** This was a cross-sectional study in which 360 systematically selected participants completed five-point Likert scale self-administered questionnaires.

**Results:** Overall, participants were quite satisfied (mean score = 3.75) with the services provided by the different service providers. The participants indicated that overall, the quality of care of the health care facility was good (mean score = 3.45). The pharmacy received the highest satisfaction level with a mean rating of 4.1. Thirty-eight per cent of the participants rated the services provided by the doctors as best despite giving the highest quality ratings with a mean of 3.9 to the pharmacy compared to mean ratings of 3.4 for the doctors. The participants' greatest displeasure was with the time spent at the facility, as 63.9% of them were displeased with this aspect. A total of 36.9% was most pleased with information given to them as a factor of importance.

**Conclusion:** The participants were quite satisfied with the services provided as well as the quality of care provided by the different service providers of the health care facility. There is, however, a need for interventions in terms of time spent at the facility, which would promote good customer-focused service delivery.

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## Introduction

Patients' health largely depends on the primary health care sector of the country. Primary care involves a sustained partnership between patients and providers that addresses the majority of a population's health needs over time.<sup>1</sup> It is crucial that primary health care providers are engaged in ensuring that their patients are able to timeously access diagnostic, treatment and rehabilitative services.<sup>1</sup> There is increasing evidence that the service aspects of health care are closely linked to health care outcomes and this issue has caught the attention of industry leaders.<sup>2</sup> Patient satisfaction has emerged as an increasingly important parameter in the assessment of health care quality.<sup>3</sup>

In improving the service delivery in primary health care clinics, there is a need to place high priority on the consumers and their level of satisfaction with the provided services. Patients' perception of satisfaction is an aspect of health care quality that is being increasingly

recognised for its importance.<sup>4</sup> Modern-day consumers of health are better educated and informed than ever before, and this has led to the need to address the aspects of service most readily appreciated.<sup>2</sup> Positive perceptions of patients of care often translate into more positive outcomes in their clinical experience and satisfaction is thus assured.<sup>5</sup> It is evidenced that addressing patients' perceptions appropriately leads to improved health care and this will go a long way in increasing their level of satisfaction.<sup>2</sup> According to a survey in a community-based study in Kuwait, people who have poor access to medical care had a higher rate of hospitalisation for common medical conditions.<sup>6</sup> Another study of patients' satisfaction with the quality of primary health care in Saudi Arabia showed that patients were dissatisfied with several aspects of access, including waiting areas and the physical environment.<sup>7</sup> Smooth patient flow through the outpatient department (OPD) is essential in the prevention of delays in outpatient visits.<sup>8</sup> With the removal of barriers to access and

the provision of preventive services, it was indicated that there will be an improved quality of care by effecting earlier diagnosis and more favourable outcomes.<sup>2</sup>

Botswana is an upper-middle-income country in sub-Saharan Africa. It is a landlocked country in southern Africa bordered on the west by Namibia, with South Africa to the south and southeast, Zimbabwe to the northeast, and Zambia and Angola to the north. Approximately 60% of the population is urban. Setswana is the national language and English is the official language. In Botswana, both the Ministry of Health (MOH) and the Ministry of Local Government are responsible for providing health care at different levels of the health care system. The country has a six-tiered health care delivery system: primary, district and referral hospitals; clinics, health posts and mobile stops.<sup>9,10,11</sup> The MOH runs the primary, district and referral hospitals, sets national policies and is responsible for health care personnel training, while the Ministry of Local Government manages the clinics, health posts and mobile stops.<sup>9</sup> The hospitals are open 24 hours a day and the clinics are open from 07h30 to 16h30 (with doctors on call to attend to emergencies).<sup>9</sup> Health care services are virtually free at the public facilities, requiring only a nominal charge of 5 Botswana pula (US\$0.70 at the exchange rate of 1 US\$ = 7.2 pula). It is worth noting that the maternal child health care and family planning services are exempted from the nominal fee.

In Gaborone, Botswana, there are two primary health care facilities that provide 24 hours of service. Services provided by these centres have been of great concern to both patients and the management due to the incessant complaints received from patients. This has led to public outcry and attracted media attention, which culminated in the passing of a vote of no confidence in the quality of service provided by the facilities and reduced the patients' morale with regard to their satisfaction level ratings. The objective of this study was to investigate the factors contributing to patients' satisfaction with and their rating of the quality care in Extension II Clinic in Gaborone, Botswana.

## Materials and methods

### Study design and setting

A quantitative, descriptive, cross-sectional study was conducted. The study was conducted at Extension II Clinic, which is located in the heart of Gaborone. It is the busiest clinic in the metropolis. Its proximity to most offices makes it easily accessible to most workers during working and after hours.

### Population and sample size

The target population for the study comprised all adult men and women (21 years or older) who visited the health care facility for health care services. Since the OPD forms the entry point of patients to the hospital, the sampled population was interviewed mainly at the OPD.

The minimum sample size for the study was calculated using the Epi-Info software programme. For sample size calculation, the following information was used: total number of patients in a month as 5 000, confidence interval as 95% and statistical power of the study as 90%. This gave a sample size of 360. An extra 10% of sample size was added for incomplete or unreliable answers and to reduce sampling bias, giving a final sample of 396 for analysis.

### Sampling procedure

Systematic random-sampling techniques were used to select the study sample. The sample interval was calculated from the average number of patients per day and divided by the sample expected per day, i.e.  $200/10 = 20$ . The first patient on each day was selected using the simple random-sampling method. A randomly selected number between one, two or three was used, with a number representing each patient presenting on that particular day. For example, if two was picked, the second patient to present in the OPD became the first sample and thereafter every 20th patient (i.e. 22<sup>nd</sup>, 42<sup>nd</sup>, 62<sup>nd</sup>, etc) was included in the sample.

### Inclusion and exclusion criteria

All adult men and women of age 21 years or older were included in the study. Patients below the age of 21 years were excluded from the study because they could not give consent to the study according to the law of Botswana. All emergency patients were also excluded to avoid delay in providing treatments.

### Ethical consideration

Ethical clearance for the study was obtained from the Research and Ethics Committee of the University of Limpopo (Medunsa Campus), South Africa. Approval was also sought from the Health Research Unit, MOH, Botswana, as well as the management of the district health care team. Informed written consent of the participants was obtained. To maintain confidentiality, no names appeared on the questionnaires, but only numbers were used as identifiers. Participation was voluntary and the participants were informed that they could withdraw from the study at any stage of the interview without any penalty, if they so desired.

### Data collection

A structured questionnaire was used to collect data from all study participants. The questionnaire consisted of five sections. Section 1 included biographic data, Section 2 the socio-demography of participants, while Section 3 focused on utilisation of the facility. Section 4 focused on factors related to satisfaction with various services at the facility. Section 5 addressed the ratings of the quality of services received and how these affect the level of satisfaction. The patients were asked about their satisfaction level for each of the sections of the facility they had to go through (nurses, doctors, reception/registration, pharmacy, laboratory

services and X-ray services). For the satisfaction level, each question was scored using a five-point Likert-type scale ranging from very satisfied (5) to undecided (1). For the quality of services, each question was scored using a five-point Likert-type scale ranging from excellent (5) to poor (1). The questionnaire consisted of a total of 22 items and it took approximately 25 minutes to complete the interview. Questionnaires were administered to all the participants in the study by a research assistant who was appointed and trained to facilitate the distribution and collection of questionnaires. The research assistant read out the questions to the participants who could not read or write and completed the questionnaire according to the answers given by them.

The questionnaire was pre-tested using 30 patients in Block 9 Clinic, the other 24-hour facility in Gaborone, to identify gaps and to modify the questionnaire appropriately. The questionnaire was then pilot-tested on a representative sample of 10 adult patients attending another health care facility in Botswana, and modified to ensure it answered the research questions.

### Data analysis

Data were entered into a Microsoft Excel 2003 spreadsheet and imported to SPSS Statistics version 17.0.1 for Windows for analysis. The analysis results were summarised using descriptive summary measures: expressed as mean (SD) for continuous variables and percentage for categorical variables. Student's t-test was used to compare means between frequent and non-frequent users. All statistical tests were performed using two-sided tests at the 0.05 level of significance. P-values were reported to three decimal places with values less than 0.001 reported as  $< 0.001$ .

## Results

A total of 396 questionnaires were distributed in the study; however, only 360 participants took part in the study, resulting in a 91% response rate. Table I shows the socio-demographic characteristics of the participants. The majority (77%) of the participants were below the age of 41 years. Of the participants surveyed in the study, 229 (64%) were female, 209 (58.1%) were single and 223 (61.9%) were employed. With regard to education, 142 (39.4%) had secondary education and 134 (37.2%) had tertiary education.

The various services offered in Extension II Clinic are shown in Table II. With regard to the use of Extension II Clinic, 26% and 34% of the participants reported using it once in a while and rarely, respectively. The majority of the participants (78.1%) came to the clinic for consultations either with the doctors or the family nurse practitioners, and approximately 7% came for sexual reproductive health care services.

Table I: Distribution of the socio-demographic characteristics of the participants

Characteristic	Frequency (n = 360)	Percentage
<b>Age (years)</b>		
21–30	174	48.3
31–40	104	28.9
41–50	52	14.4
> 50	30	8.3
<b>Gender</b>		
Male	131	36.4
Female	229	63.6
<b>Marital status</b>		
Single	209	58.1
Married	129	35.8
Divorce	20	5.6
Widowed	2	0.6
<b>Employment status</b>		
Unemployed	137	38.1
Employed	223	61.9
<b>Education level</b>		
No education	21	5.8
Primary	63	17.5
Secondary	142	39.4
Tertiary	134	37.2

Table II: Utilisation and types of health care services requested at the Extension II Clinic in Gaborone (n = 360)

Variables	Frequency	Percentage
<b>Utilisation of health care services</b>		
Rarely	121	34.0
Once in a while	95	26.0
Often	79	22.0
Very often	65	18.0
<b>Types of health care service requested</b>		
Consultation	281	78.1
Lab	14	3.9
X-ray	11	3.1
Immunisation	25	6.9
Sexual reproductive health	25	6.9
Other	4	1.1

### Level of satisfaction

The results showed that most participants were satisfied with the level of performance of the pharmacy unit of the facility with mean ratings of 4.1, while the nurses got the least level of satisfaction with a mean rating of 3.4 in terms of services rendered (Figure 1).

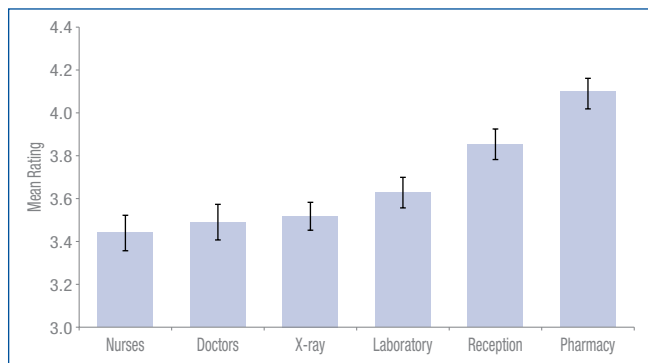


Figure 1: Patients' mean ratings of the service providers (bars = standard error of the mean rating)

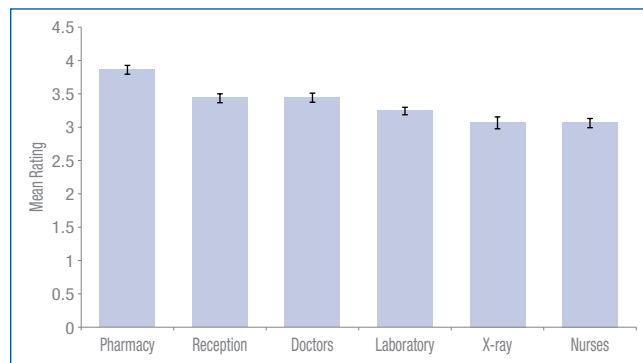


Figure 2: Participants' mean rating of the quality of services (bars = standard error of the mean rating)

Table III: Comparison of the mean satisfaction level ratings of service providers between frequent and non-frequent service users

Service provider	Utilisation	Participant rating			
		Mean	SD	Std error of the mean	p-value (t-test)
Nurses	Non-frequent user	3.50	1.53	0.10	0.297
	Frequent user	3.33	1.52	0.13	
Doctors	Non-frequent user	3.56	1.60	0.11	0.327
	Frequent user	3.39	1.56	0.13	
Reception/registration	Non-frequent user	4.00	1.23	0.08	0.012*
	Frequent user	3.63	1.51	0.13	
Pharmacy	Non-frequent user	4.11	1.26	0.09	0.823
	Frequent user	4.08	1.25	0.10	
Laboratory	Non-frequent user	3.64	1.29	0.09	0.824
	Frequent user	3.61	1.39	0.12	
X-ray	Non-frequent user	3.57	1.30	0.09	0.360
	Frequent user	3.45	1.23	0.10	

\*p < 0.05 = significant difference

A significant mean difference of satisfaction level regarding reception/registration between frequent and non-frequent users of the facility was found to be  $p = 0.012$ . However, it is worth noting that the mean satisfaction level regarding doctors, nurses, the laboratory, the pharmacy and x-ray services were not significantly different between frequent and non-frequent users of the health care facility ( $p > 0.05$ ) (Table III).

### Rating of the quality of services

The participants' ratings of the service quality as provided by the different service providers in the facility were sorted. The pharmacy, with a mean rating of 3.9, was rated higher in the quality of the service as compared to the other providers (Figure 2).

The participants were asked to indicate who provided the best services. The service provided by doctors was rated the best (38%), followed by the pharmacy (24%) and reception/registration (20%) (Figure 3). This was a striking finding, as one would have expected participants to rate the pharmacy as providing the best service as a result of being rated best in terms of the highest quality of service.

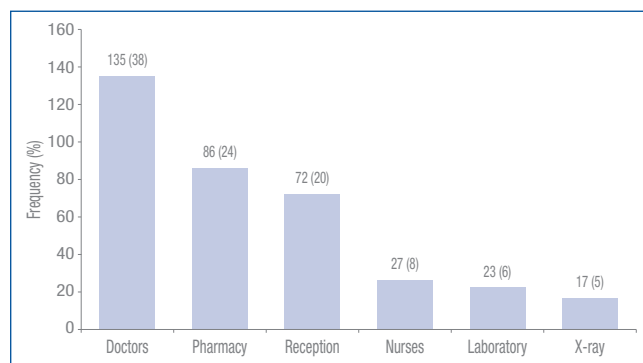


Figure 3: Participants' rating of the best service provided (n = 360)

### Factors of importance to participants

The participants rated all the listed factors as having almost equal importance when it comes to factors they considered as important and contributory to their level of satisfaction in the facility. Interestingly, 14.4% of the participants regarded time as not important as a factor as long as they got what they wanted (Figure 4).

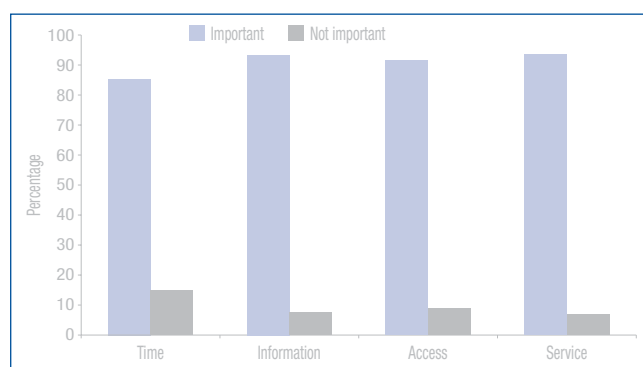


Figure 4: Participants' rating of the most important factors (n = 360)

The participants were to signify how pleased they were with the factors of importance as it affects their use of Extension II Clinic. In total, 133 (36.9%) patients were most pleased with information given to them. Their greatest displeasure was with the time spent at the facility, as indicated by 63.9% (Table IV). Ten per cent of the participants felt dissatisfied with everything done within the facility.

Table IV: Ratings of displeasure of factors of importance (%) (n = 360)

Factors	Most pleased	Least pleased
Information provided	36.9	7.5
Services provided	30.8	7.8
Access to the clinic	11.9	3.9
Time spent	8.9	63.9
None	8.3	11.9
All	3.1	5

## Discussion

This study on factors associated with patients' satisfaction in Extension II Clinic in Gaborone focused on determining the level of satisfaction of the patients that visited the clinic. The participants also established their ratings of the quality of service received, factors of importance to them, where and who provided the best service to them and how best to improve on the services provided in the facility.

### Level of satisfaction

The study revealed that most of the participants gave the highest satisfaction rating to the pharmacy, followed by the reception/registration services, then the doctors' services, with the mean ratings just slightly above average, with the pharmacy and reception/registration scoring 4.1 and 3.9 out of 5 respectively. This finding is similar to that of a study on patient satisfaction in primary health care services in Egypt, which indicated that 52.2% and 81.2% of participants were satisfied with the level of service received by the pharmacy in the two centres studied.<sup>12</sup> Another study on satisfaction and correlates of patients' satisfaction with physicians' services in primary health care centres found that a high level of customer satisfaction correlates well with a good relationship with the physician, which boosted the loyalty of patients – a factor of importance and vital for patient satisfaction.<sup>13</sup>

There is a significant mean difference in the utilisation of service by the participants with regard to reception/registration between frequent and non-frequent users respectively ( $p = 0.012$ ). This finding is not surprising, as the non-frequent users rated their satisfaction level higher compared to the frequent users in terms of the point-of-entry reception/registration. This can be explained on the basis that the non-frequent users do not have sufficient contact with the providers. The non-association of facility use with satisfaction level can be related to the fact that primary health care clinics are the entry point into health care service delivery in Botswana, which therefore means every one that needs care must come through the clinic, even if unsatisfied with the performance.

### Rating of the quality of services and best service provided

The pharmacy was rated significantly higher (mean rating of 3.9) in terms of the quality of service compared to the rest. Interestingly, it also received the highest level of satisfaction (mean rating of 4.1) according to the study findings. What is surprising is the fact that most participants indicated that they received the best service from the doctors, the pharmacy and reception/registration, in that respective order. This finding can be explained by the fact that most of the patients find consultations with the doctors as fulfilling their desire of coming to the facility. This is where they interact one on one in private and establish a relationship, which is vital for the success of primary health care. The utmost communication and information sharing with the doctor thereby gives them a renewed confidence about whatever ailment they came in with. According to the literature, non-understanding of patients' information needs will affect any meaningful service improvement made.<sup>14</sup> These characteristics are of immense importance in contributing to patients' satisfaction with and ratings of services received. In a study on patient experiences in relation to participant and health care service delivery characteristics, it was reported that for success, primary health care physicians must establish relationships with their patients.<sup>15</sup>

### Factors of importance

From the study findings, the participants were most pleased with the provision of information. This concurs with the findings in a study on advice to patients in Swedish primary health care, in which it was found that provision of information is ranked higher by patients than by the physician in terms of factors contributory to satisfaction.<sup>16</sup> Another study showed that patients value information highly, as satisfaction in this regard correlated strongly with the amount of information patients received from their physicians.<sup>17</sup> Provision of information ranked high from the patients' point of view, but most physicians still do not rank it high, as found in a study in which provision of information was ranked second in importance by patients, but only sixth by physicians.<sup>18</sup> Despite the high ranking of this by patients, many physicians still struggle to fully understand patients' information needs. The literature also indicates that this disagreement in importance of patient information is still a concern if not well acknowledged by physicians and that it has a negative effect on clients' perception of the quality of care.<sup>2</sup>

In the current study, most participants (63.9%) were displeased with the time spent in the facility. Their displeasure with the waiting time in the facility is corroborated by several studies, which documented the relationship between waiting for service and overall satisfaction, with longer



waiting times being associated with decreased patient satisfaction.<sup>19</sup> Waiting time is a source of dissatisfaction for patients and remains a challenge to the quality of care and services in clinics.<sup>20</sup> This is also supported by the findings of a study conducted in Egypt, where waiting time contributed to 47% of patients' dissatisfaction in an assessment of quality of care.<sup>21</sup> Waiting time is a significant component of patient satisfaction, as it was indicated that almost half the participants (46.7%) were dissatisfied with the time spent in the facility.<sup>22</sup> In a similar study conducted in Israel, it was hypothesised that the "time factor" (time spent on scheduling and waiting time in the clinic) is a major contributor to overall satisfaction and found that waiting times significantly correlated with overall satisfaction.<sup>3</sup>

Accessibility is one of the principles of health for all, as stated in the Alma-Ata Declaration on primary health care.<sup>23</sup> From this study, it is reported that ease of access to the facility was of importance to 91.4% of the participants. According to a study conducted in Kuwait, people who have poor access to medical care had a higher rate of hospitalisation for common medical conditions.<sup>6</sup>

## Limitations of the study

The sample was selected from only one health care facility. The results of this study can therefore not be generalised to other health care centres in Gaborone.

## Conclusions

The results of this study have revealed that overall, participants were quite satisfied with the services provided as well as the quality of care provided by the different service providers of the health care facility. There is a need for interventions in terms of time spent at the facility. Such interventions would promote good customer-focused service delivery, which will boost the image of the facility, ensure increased facility utilisation and aid in maintaining and improving the health of participants – thereby promoting their wellbeing and quality of life.

## Declarations

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