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# Examining Health Equity through Satisfaction and Confidence of Patients in Primary Healthcare in the Republic of Trinidad and Tobago

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## ABSTRACT

Surveys of patient satisfaction are widely used for identifying priorities and problems in healthcare reforms. The present study examined satisfaction and confidence of patients in public healthcare in Trinidad and Tobago. Data were gathered by interviewing a random sample ( $n=280$ ) of primary healthcare (PHC) patients. Level of patient satisfaction was high but not constant. Results of interviews showed that patients with a higher monthly income ( $p=0.032$ ) and patients who most recently used private medical care ( $p=0.037$ ) had lower levels of satisfaction with health services. Employment had an effect on satisfaction ( $p=0.065$ ), significant among patients who had recently accessed private medical care ( $p=0.039$ ). Patients using PHC clinics preferred private care to public care. Confidence in public care decreased with increasing complexity of the medical condition. These preliminary results support continued efforts in health-sector reforms and call for the enhancement of data on satisfaction through more comprehensive qualitative data-collection methods.

**Key words:** Primary healthcare; Quality of healthcare; Patient satisfaction; Health behaviour; Socioeconomic factors; Caribbean region; Trinidad and Tobago

## INTRODUCTION

In the current era of global health-sector reforms, studies of patient satisfaction have been recognized as ways to identify priorities and problems of healthcare systems. While studies of patient satisfaction are more commonly used in research on health-sector reforms in the wealthier countries of the North (1), it is in the less-affluent countries of the South that the need for focused reform and quality assurance is most pressing.

Studies of patient satisfaction have shown that perceptions of quality of healthcare services influence health-seeking behaviour of patients (2-4); higher levels of patient satisfaction increase patient compliance with suggested medical treatment (5,6); and better-satisfied patients are more likely to provide medically-relevant

information on their health, which improves diagnostic accuracy on the part of the doctor (5). With low levels of patient satisfaction, patient and provider compliance, diagnostic accuracy, and coverage decrease, which weakens the potential efficacy of a treatment, thereby reducing the cost- and community-effectiveness of that treatment (2,7).

Studies of patient satisfaction help researchers determine at what point the effectiveness of a health system is being compromised, which helps determine where funds should be allocated (7). When health researchers and policy-makers derive priorities of reforms in collaboration with patients, they acknowledge the validity and importance of their feelings of patients regarding healthcare.

This study examined three main issues of interest in the PHC system in Trinidad and Tobago, in the context of an ongoing health-sector reform programme: the demographic composition of the PHC population; the satisfaction level of patients, analyzed by demographic

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group; and the level of confidence in public healthcare shown by patients. Results of this study update and extend the information previously available on patient satisfaction in the PHC system in Trinidad (8-10).

### MATERIALS AND METHODS

The preliminary research presented in this study was conducted in Primary Healthcare clinics in the Republic of Trinidad and Tobago.

#### Data collection

Data for this study were collected using a context-specific questionnaire finalized following interviews with consultants and staff at the Trinidadian Ministry of Health (MoH). The questionnaire and the consent form were approved by the Principal Medical Officer of Health for Community Services (PMOH-CS) early in January 2002, and permission was obtained to interview patients at clinics throughout Trinidad and Tobago. Two research locations were chosen in each of eight county areas, for a total of 16 locations. To ensure proper coverage of remote clinics, locations were divided into urban and rural groups within the Regional Health Authorities (RHA), and an equal number of urban and rural clinics were selected by random lottery.

Queue numbers of patients were used for random selection of adult patients aged 15 years and over, to be approached. A trained researcher interviewed patients who gave informed consent. Due to a high level of functional illiteracy in Trinidad and Tobago and consequent problems with selection bias, a self-administered questionnaire was not considered appropriate for this study. No proxy was allowed to respond on behalf of any patient; if a patient was not capable of responding, the interview was terminated. Responses were anonymous, and patients were identified only by a code number. In total, 280 interviews were completed and included in this analysis.

Demographic information was collected through an initial series of questions. Respondents were then asked about their satisfaction with six aspects of their healthcare experience: waiting time; condition of the facilities; care by nurse; care by doctor; length of examination by doctor; and communication skills of doctor. Satisfaction was recorded using the five-point Likert scale (8). Information on patient preference for public or private healthcare was collected. Patients were asked whether, in general, they would choose public care or private care, if money were not a consideration, and were asked to

identify the factor that most influenced this preference. Confidence of patients in PHC was also investigated by asking respondents whether they preferred public or private care, with reference to 18 medical conditions of differing severity and requiring various levels of care.

#### Satisfaction with care

Information on satisfaction was collected for each of six aspects of care. Satisfaction scores for care by doctor, length of examination by doctor, and communication skills of doctor were highly correlated (>70%), which suggested that patients responded to the word doctor rather than to three distinct aspects of care. Exploratory Principal Components Analysis confirmed that scores for these factors were closely related, so the average score, out of five, was taken and recorded as a composite, "care of doctor". A satisfaction index was then created by summing the scores (out of 5) for waiting time, nursing care, facilities, and the composite care of doctor, for a total score out of 20. This index score was used in demographic analysis.

### RESULTS

The frequencies of various demographic groups in the PHC sample are presented in Table 1.

Patients in the PHC clinics were 2.7 times more likely to be female than male. Forty-seven percent of the sample were aged 50 years and over. More than two-thirds of the PHC population were not employed outside the home (includes pensioners, those receiving disability/widows benefit, 'housewives', and the unemployed). Seventy-five percent of women were not employed compared to 50% of men. Approximately, 50% had an annual income below TT\$ 10,000. The mean and median monthly income was TT\$ 1,245 and TT\$ 800 respectively. Only 20% of the respondents interviewed had visited a private doctor most recently.

#### Analysis of satisfaction scores

When the satisfaction scores of the respondents were obtained, 73% of scores fell in the categories of either 'satisfied' or 'very satisfied'. ANOVA (SPSS 10.0) was then used for examining the variation in the overall satisfaction score to determine whether the mean satisfaction scores of various demographic sub-groups were statistically different from one another. The effects of all basic and socioeconomic demographic categories on satisfaction were tested, and the results are shown in Tables 2 and 3.

The basic demographic categories, such as sex, age, ethnicity, religion, and location, were examined first. Location was examined in two ways: first, by RHA within which the patient was attending the clinic; and second, whether they resided in an urban or rural area. None of the basic demographic categories showed any effect on satisfaction scores.

**Table 1.** Demographic composition of PHC sample

Category	No. of individuals	Percentage of total (n=280)
Sex		
Male	75	26.8
Female	205	73.2
Age group (years)		
15-19	10	3.6
20-29	52	18.6
30-39	41	14.6
40-49	46	16.4
50-59	69	24.6
60-69	39	13.9
70+	23	8.2
Ethnicity		
African	122	43.6
East Indian	94	33.6
Mixed	54	19.3
Other	10	3.6
Religion		
Christian	221	78.9
Hindu	43	15.4
Muslim	16	5.7
Employment status		
Not employed (outside the home)	191	68.2
Employed	89	31.8
Piped water		
No	83	29.6
Yes	197	70.4
Annual household income (\$)*		
Less than 10,000	139	49.6
10,000-19,999	58	20.7
20,000-29,999	32	11.4
30,000-39,999	12	4.3
40,000-49,999	2	0.7
50,000+	11	3.9
Refused/did not know	26	9.3
* In Trinidad and Tobago dollars TT\$ 1=US\$ 0.16 (February 2002)		

Socioeconomic differences between respondents had a greater influence on satisfaction than basic demographic differences did. Those patients who had last attended a private doctor were less satisfied with care than those who had attended a public clinic, an effect which was very close to significance ( $p=0.06$ ). There was no difference in satisfaction between those who had last

attended the same public clinic and those who had attended a different public location.

**Table 2.** ANOVA results for basic demographic categories

Demographic category	Degrees of freedom	F-test statistic	Significance
Sex	1	0.067	0.796
Age	1	1.518	0.219
Ethnicity	2	1.620	0.304
Religion	2	0.174	0.841
RHA area	3	0.649	0.584
Urban/rural	1	2.496	0.116

A univariate linear model was used for determining whether the level of monthly income was related to the reported level of satisfaction. The model showed that as the covariate 'monthly income' increased, satisfaction with overall care decreased significantly ( $p=0.05$ ,  $F=3.954$ ). Annual income, which was recorded in ten thousand dollar increments, did not show any similar effect on satisfaction. However, since 50% of this sample reported an income less than TT\$ 10,000, it is possible that the size of the income brackets swamped the effect. Use of smaller income brackets is indicated for future research of this kind.

**Table 3.** ANOVA results for socioeconomic categories

Demographic category	Degrees of freedom	F-test statistic	Significance
Annual income	5	1.088	0.369
Employment	1	0.481	0.489
Piped water	1	0.519	0.472
Previous clinic visit	1	2.920	0.06 <sup>m</sup>
Monthly income	1	3.954	0.05*
<sup>m</sup> Marginally significant			
*Significant			

### Linear regression models

A linear regression model was constructed to determine what portion of the variation in satisfaction could be explained by combinations of various explanatory factors. The initial regression model included sex, age, ethnicity, religion, RHA, employed, piped water, previous clinic visit, and monthly income (Table 4). Only main effects were examined in the initial model due to the large number of explanatory categories included.

The initial regression model explained only 7% of the variation ( $R^2=0.211$ ; adjusted  $R^2=0.069$ ) and did not reach significance ( $p=0.174$ ). To increase the explanatory power of the model, the number of factors was limited, and a new model was fitted. The new regression model

(Table 5) included only those factors that were significant or close to significant in the initial model.

Explanatory factor	Degrees of freedom	F-test statistic	Significance
Sex	1	0.001	0.969
Age	1	0.484	0.488
Ethnicity	3	0.210	0.889
Religion	2	0.306	0.737
RHA	3	1.227	0.306
Employed	1	3.505	0.065 <sup>m</sup>
Piped water	1	0.652	0.422
Previous clinic visit	1	4.493	0.037*
Monthly income	1	4.778	0.032*
Corrected model	11	1.486	0.136
Explanatory value		R <sup>2</sup> =0.211	R <sup>2</sup> =0.069**

<sup>m</sup>Marginally significant  
 \* Significant  
 \*\* Adjusted R<sup>2</sup>  
 RHA=Regional Health Authorities

Previous clinic visit ( $p=0.037$ ) and monthly income ( $p=0.032$ ) were included in the refined regression model, as was employment, which was close to significance ( $p=0.065$ ) in the initial model. The new model was tested, including various interactions between these three main factors. However, the model with the greatest explanatory

Explanatory factor	Degrees of freedom	F-test statistic	Significance
Previous clinic visit	1	9.668	0.003*
Monthly income	1	5.099	0.026*
Employment	1	0.979	0.325
Interaction of previous clinic visit and employed	1	4.404	0.039*
Corrected model	4	5.299	0.001*
Explanatory value		R <sup>2</sup> =0.194	R <sup>2</sup> =0.157

\* Significant

power included only the interaction between previous clinic visit and employment. The refined regression model explained 16% of the variation in scores ( $R^2=0.194$ ; adjusted  $R^2=0.157$ ) and was significant at the 0.001 level ( $F=4.396$ ).

### Confidence and healthcare-seeking behaviour of patients

Patients were asked whether they would choose public or private care for 18 different medical situations. In all but two cases, the majority of the patients preferred to

choose to access public care (Fig.). Choice of public care varied from 86.8% of the respondents for immunization to 53.6% for prenatal care. For a full check-up, 51% of the patients actually preferred private care, while for critical illness, a larger minority chose private care than public care (44% vs 40%; 16% no response).

Patients were also asked whether they would choose public or private care, if money were not a consideration. Those respondents who stated a preference for private healthcare were asked to name the primary reason for their preference. These reasons were coded into various factors and are listed in Table 6.

## DISCUSSION

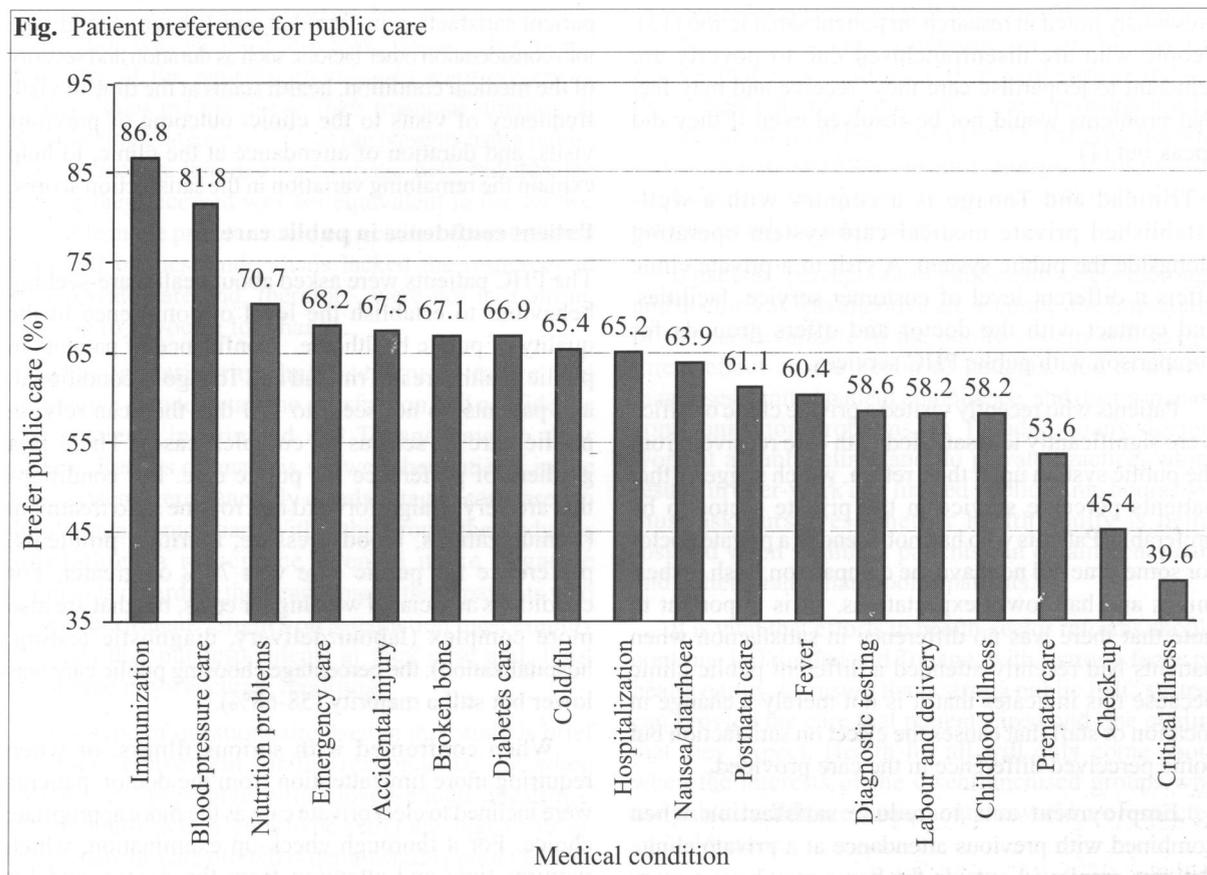
### Demographics of patient population

The results of analysis strongly suggest that the free medical care available in the PHC system is a necessity

Factor	Percentage of total (n=154)
More time/care/attention from doctor	29.2
Shorter waiting time	20.8
More thorough examination	11.7
More confidential/private	11.0
Better facilities	3.9
Characteristics of doctor	9.7
Specialization of doctor	0.6
Distance to travel	0.6
Customer service better	1.3
'Better'	11.0
Total	100.0

in Trinidad and Tobago, despite the proliferation of private healthcare clinics and doctors. The majority of PHC patients belong to relatively disadvantaged segments of the Trinidadian population. Patients are more likely to be women, older adults, and individuals who are not employed. Women in Trinidad are less likely to be employed and to have control over their own finances than men (11).

Older people are not only more likely to need healthcare, but are also more likely to be living on a fixed income. Over 65% of the PHC population were not employed compared to an estimated unemployment of approximately 12.8% in Trinidad and Tobago (11). Fifty percent of the sample reported an annual income less than TT\$ 10,000 and their median monthly income was TT\$ 800. As GNP per capita for Trinidad and Tobago



is TT\$ 26,000 per year (12), these patients are clearly at a lower level of socioeconomic status than the average Trinidadian. The PHC system provides free medical care to the poor and disadvantaged sections of the population and, as such, is essential to the society.

### Patient satisfaction

The level of patient satisfaction reported in this study was quite high, with 73% reporting either 'satisfied' or 'very satisfied' with overall care. However, as the satisfaction rate was not equal across all groups, this rate required further investigation. Some patients informally expressed dissatisfaction during the interview, but did not give a questionnaire response of 'dissatisfied' or 'very dissatisfied', which indicates that some recorded opinions of patients were less than accurate, and the satisfaction level obtained was somewhat inflated.

When satisfaction of patients was examined by demographic group, it became clear that patients with higher incomes, patients who were employed, and patients who had recently attended a private doctor were more likely to express dissatisfaction as they had a

greater control over their health circumstances than other groups. In the linear regression model, these socioeconomic factors explained the greatest portion of the variation in the satisfaction scores. The effect of socioeconomic status on satisfaction may operate in two ways.

Higher monthly income and visiting private care both lower satisfaction with care in the PHC clinics by raising expectations of patients with regard to quality of care. With regard to the first of these factors, patients with more disposable income have higher expectations, but in the publicly-funded system in Trinidad and Tobago, there is no concomitant increase in the level of care due to level of income. In this way, higher income increases expectations for care and feelings of personal prerogative, without resulting in privilege in treatment. Wealthier patients also have a greater sense of control over their health circumstances because they may be able to seek care elsewhere if they are not satisfied. Therefore, more affluent patients are both more likely to be dissatisfied and more likely to express their dissatisfaction. Patients who cannot afford other care are reluctant to express doubts about public care due to the 'self-interest bias'

previously noted in research on patient satisfaction (13). People who are disenfranchised due to poverty are reluctant to jeopardise care they receive and may feel that problems would not be resolved even if they did speak out (1).

Trinidad and Tobago is a country with a well-established private medical care system operating alongside the public system. A visit to a private clinic offers a different level of customer service, facilities, and contact with the doctor and offers grounds for comparison with public PHC services.

Patients who recently visited a private clinic or office were significantly less satisfied with care received from the public system upon their return, which suggests that patients perceive service in the private sector to be preferable. Patients who had not attended a private doctor for some time did not have the comparison fresh in their minds and had lower expectations. It is important to note that there was no difference in satisfaction when patients had recently attended a different public clinic because this indicates that it is not merely a change in location or staff that causes the effect on satisfaction but some perceived difference in the care provided.

Employment acts to reduce satisfaction when combined with previous attendance at a private clinic. Patients employed outside the home may have a more exacting schedule to meet and have less time to wait at a clinic. The influence of employment was enhanced when the patient had also recently been exposed to private care, where waiting times are generally much shorter. Waiting times at public clinics are generally longer than two hours. In the Trinidadian context, even a flexible working schedule would not make a great deal of difference with regard to dissatisfaction with long-waiting times: those patients who have flexibility in working hours are generally self-employed (market gardener, taxi driver, etc.), which means that their income is directly related to the number of hours they are able to work in a given day. Thus, patients who are employed are more likely to be frustrated due to long-waiting times, and, by reason of being employed, are more likely to express their dissatisfaction.

The regression model based on the socioeconomic and demographic explanatory categories examined in this study explained 16% of the variation in the satisfaction scores. The differences in personal power or control were clearly at the heart of the difference in willingness to express dissatisfaction. Future studies on

patient satisfaction in Trinidad and Tobago should take into consideration other factors, such as duration and severity of the medical condition, health status at the time of visit, frequency of visits to the clinic, outcome of previous visits, and duration of attendance at the clinic, to help explain the remaining variation in the satisfaction scores.

#### **Patient confidence in public care**

The PHC patients were asked about healthcare-seeking behaviour to establish the level of confidence in the quality of public healthcare. Confidence of patients in public healthcare in Trinidad and Tobago is conditional, and patients do not seem to feel that they can rely on public care in serious or complex cases. There is a gradient of preference for public care. For conditions that are very straightforward and routine as to treatment (immunizations, blood pressure, nutrition problems) preference for public care was 70% or greater. For conditions associated with higher costs, but that are also more complex (labour/delivery, diagnostic testing, hospitalization), the percentage choosing public care was lower but still a majority (58-68%).

When confronted with serious illness, or when requiring more time/attention from the doctor, patients were inclined to elect private care as the more appropriate choice. For a thorough check-up examination, which requires time and attention from the doctor, and for critical illness, in which there is a greater risk of death, more patients would elect private care than public care. When the perceived benefits of private care outweighed the financial costs, patients were willing to spend money to use the private sector.

When patients were asked whether, if they had insurance to cover the costs, they would prefer to attend public or private healthcare, 69% of the respondents preferred private care. The reasons given for preference for private care were not primarily convenience or improved facilities. Only 4% mentioned facilities as being the most important reason, whereas almost 30% specified more time/care/attention from the doctor as the most important factor, 12% listed a more thorough examination, and another 10% listed other characteristics/skills of the doctor. The majority (nearly 52%) clearly based their preference for private care on substantive aspects of care that can directly affect health outcomes rather than comfort issues, such as pleasant surroundings or better customer service.

When asked why they chose a public clinic on the day of the interview, 45% stated that free service was

the main reason, and another 5% stated that free medication was the most important reason. This means that 50% of the patients interviewed were present in public clinics mainly due to their financial situation. It is disturbing that nearly 70% of the patients using public PHC clinics in Trinidad and Tobago believed that the service they received was not equivalent to the service available in the private sector, especially because no less than half of these individuals lacked the resources to seek private care and, therefore, were not in a strong position to advocate for change.

This investigation has used quantitative and qualitative data to detail the satisfaction and confidence PHC patients in Trinidad and Tobago have in their system. Results of analysis showed that patients in the PHC system were generally disadvantaged compared to the average Trinidadian. Within this group, the study has highlighted a reluctance even to make negative comments regarding their care among those patients who were less affluent. Studies on satisfaction must employ methods that put respondents at their ease and, thus, encourage more accurate reporting.

The type of questionnaire used in this study is brief and more convenient for the respondents, but when patients are presented with closed-ended questions, reported satisfaction tends to be extremely high (>80%), even when the care offered is demonstrably poor (14,15). In future studies, open-ended questions, longer one-on-one interviews, and focus-group discussions should be employed to allow patients to describe and analyze their health system rather than trying to fit their responses into a five-point framework.

Studies on patient satisfaction are intended to gather information from patients to improve the healthcare system, but as this study has shown, patients who did not have the option to seek alternative care could not risk expressing their dissatisfaction and, therefore, remained voiceless.

The majority (69%) of the patients in the PHC system stated a preference for private healthcare and, importantly, the advantages that the patients mentioned when referring to private services were in substantive areas of care, like the thoroughness of the doctor's examination, not merely convenience or quality of the facilities, which could be expected to be superior at a privately-run clinic.

The perception of a lack of quality in public care could affect health outcomes for a patient in two possible ways. First, even if perceptions of patients were exaggerated or based on merely convenience factors,

those perceptions would still have an indirect effect on the health of patients. Literature on satisfaction has shown that reservations with regard to quality can discourage patients from seeking care, possibly until it is too late to treat the condition (7). Patients become unwilling to spend time and energy if they lack confidence in the system, which can lead indirectly to serious health consequences.

If patients' perceptions of public care as less thorough and doctor's as less attentive are accurate, the limitations of the care available in the public system will have a direct effect on the health of patients, due to missed diagnoses, limited patient compliance, and doctor/patient communication problems. In Trinidad, many doctors work at a public clinic and do private practice, which results in over-work and limited public clinic hours. We must ask ourselves whether health equity is being fostered when wealthier patients can obtain better care and better health than poorer patients.

It is vital that efforts in health-sector reforms should continue in Trinidad and Tobago, with a strong focus on health equity, to ensure that a strong public PHC system can provide the care that patients need and the quality that they expect. Health for all will only come about when the interests of the disenfranchised groups who use public healthcare throughout the world are respected and addressed.

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