Patient Satisfaction and Quality of Life Among Persons Attending Chronic Disease Clinics in South Trinidad, West Indies

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ABSTRACT

Objective: Patient satisfaction and quality of life are increasingly being recognized as central elements in the monitoring and evaluation of healthcare. In this survey, the level of patient satisfaction and quality of life were investigated in regular attendees at public health chronic disease facilities in South Trinidad.

Method: A random sample of 200 clients attending the three public chronic disease clinics during the period August 12, 2002 to December 31, 2002, completed self-administered questionnaires consisting of socio-demographic, quality of life (SF 12) and health service items.

Results: Participants had an average of four annual visits and 75% of them were 50 years and older. Approximately two-thirds of participants gave health and support staff a rating of good to excellent. Overall clinic experience was rated as poor to fair by 41.5%. Forty-five and a half per cent gave a rating of the explanations given by doctors and nurses about their illnesses. Fifty-three and a half per cent and 58% gave a poor to fair rating for the length of the waiting time and explanation offered when there was a significant delay in the starting times of clinics respectively.

In regression analyses controlling for age, gender and number of illnesses, ratings of clinic experience and all categories of clinic staff were significantly associated with SF-12 mental and physical component summary scores.

Conclusion: The findings suggest that in this population of regular clinic attendees, levels of client satisfaction and numbers of illnesses are associated with subjective quality of life.

Satisfacción del Paciente y Calidad de Vida Entre las Personas que Atienden las Clínicas de Enfermedades Crónicas en Trinidad Sur, West Indies

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RESUMEN

Objetivo: La satisfacción del paciente y la calidad de vida ganan cada vez mayor reconocimiento como elementos centrales en el monitoreo y evaluación de la atención a la salud. En este estudio se investigó el nivel de satisfacción del paciente y la calidad de vida en personas que asisten regularmente a los centros de salud pública de Trinidad Sur, especializados en enfermedades crónicas.

Método: Una muestra aleatoria de 200 clientes que asistían a las tres clínicas públicas de enfermedades crónicas en el período comprendido de agosto 12, 2002 a diciembre 31, 2002; llenado de cuestionarios auto-administrados consistente en ítems relacionados con datos socio-demográficos, la calidad de vida (formato corto SF 12), y los servicios de salud.

Resultados: Los participantes tuvieron un promedio de cuatro visitas anuales y el 75% de ellos tenían 50 años de edad o más. Aproximadamente dos tercios de los participantes le dieron al personal de la salud y al de apoyo calificaciones de bien a excelente. La experiencia clínica en general obtuvo de parte

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*del 41.5% calificaciones de pobre a aceptable. Cuarenta y cinco y medio por ciento dieron califi-
caciones a las explicaciones que sobre sus enfermedades dieron los doctores y las enfermeras. El
cincuenta y tres y medio por ciento y el 58% dieron calificaciones de pobre a aceptable por el tiempo
de espera y la explicación ofrecida cuando se producía una demora significativa en los horarios de
comienzo de las clínicas, respectivamente. En los análisis de regresión que controlaban la edad, el
género, y el número de enfermedades, las calificaciones de la experiencia clínica y todas las categorías
del personal clínico estuvieron asociadas significativamente con las puntuaciones sumarias SF-12 de
los componentes físico y mental.*

Conclusión: *Los hallazgos sugieren que en esta población de personas que asisten regularmente a las
clínicas, los niveles de satisfacción del cliente y el número de enfermedades, se hallan asociados con
los niveles de satisfacción del cliente y la calidad de vida.*

INTRODUCTION

Modern healthcare systems are seeking to adopt a more client-oriented approach to the delivery of healthcare. With this paradigm shift, patient satisfaction and quality of life are becoming increasingly as important as the more traditional clinic outcomes in the monitoring and evaluation of healthcare delivery (1). In fact, both these measures are important predictors of morbidity, mortality and compliance with treatment among adults. This paradigm shift is embodied in the mission statement of the Health Sector Reform Programme (HSRP) of the Government of the Republic of Trinidad and Tobago – "To improve the health status of the people of Trinidad and Tobago by promoting wellness and providing quality healthcare in an efficient, equitable and sustainable manner" (2). The HSRP seeks to address the issues associated with the changing epidemiological profile of the society typified by the high prevalence of costly, chronic, non-communicable and lifestyle diseases such as cardiovascular illnesses, diabetes and various cancers as well as the increasing incidence of HIV/AIDS among persons 15 to 44 years old. To ensure a client-oriented quality healthcare delivery, a Patient's Charter of Rights and Obligations and client/patient feedback system have been included in the overall strategy.

The success of this quality initiative depends on the regular assessment of outcomes (*ie* overall health and quality of life, satisfaction with the quality of care and services, as well as the traditional clinical health measures). Thus, client satisfaction and quality of life are increasingly being recognized as central elements in the monitoring and evaluation of healthcare. Patient satisfaction is related to the extent to which general healthcare and condition-specific needs are met. Patient satisfaction is a multidimensional construct that includes humaneness of staff, availability of care, convenience, financial accessibility, quality of care and condition of facilities. It represents the recipient's assessment of the salient aspects of his or her experience. The difficulty in measuring the many dimensions of patient satisfaction and the fact that it is used to make conclusions about clinical outcomes lead to a host of methodological difficulties (3–6). Despite these difficulties, patient satisfaction appears to be a good indicator of the quality of healthcare delivery as satisfied patients are more likely to comply with medical treatment and become active participants in their healthcare (7–10). In addition, an evaluation of patients' satisfaction can identify potential areas for improving services as well as effective targeting of resources. These are of great importance to purchasers and providers of healthcare services (11, 12). Patient satisfaction is usually assessed from questions designed to measure satisfaction with services provided at healthcare facilities and by all categories of staff (*ie* physicians, nursing personnel and allied health staff (11).

The ultimate goal of health services is to improve and maintain the health and functional capacity of the population served. In fact, the World Health Organization (WHO) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (13). Implicit in this definition is the notion of subjective well-being. Thus, the patient's point of view becomes an important ingredient in the assessment of his or her health and an index of the quality of healthcare delivery. Consequently, the measurement of health-related quality of life (HRQL) is mandatory in the overall assessment of health outcomes. This realization has led to the development of a variety of instruments for assessing the many dimensions of function and well-being. Health-related quality of life is widely regarded as a robust measure of outcome and is used extensively in clinical assessment (5, 14–17). Thus, patient-centred outcomes have taken centre stage as a primary means of measuring health and well-being and the effectiveness of healthcare delivery. In this study, patient satisfaction and quality of life were investigated in regular users of the public health chronic disease clinics in South Trinidad.

SUBJECTS AND METHODS

This cross-sectional study comprised patients who attended the diabetic and renal public health clinics of the South West Regional Health Authority. Participants had to be regular attendees at the particular clinic (*ie* they must have had at least three scheduled clinic visits per year).

Based on monthly attendance at the clinics, it was estimated that clinics would have a throughput of 500 regular patients every quarter. A random sample of 40% of patients attending the three public chronic disease clinics in the South

Regional Health Authority district were interviewed *ie* La Romain and Pleasant Ville Health centres and the San Fernando General Hospital. Since patients use a number system for attendance, a random sample of issued numbers was selected for each clinic session and persons in possession of these numbers were invited to participate in the survey. Surveys were continued on a weekly basis until the goal of 200 participants was realized.

Prior to participation, the basis of the survey was explained and those persons agreeing to participate were requested to sign a consent form. Anonymity of respondents was maintained throughout the study. Participants were then asked to complete the questionnaire which consisted of socio-demographic, quality of life and health service items.

Overall, the questionnaire had 35 items and was completed in 15 minutes. Patient satisfaction was assessed from questions designed to measure satisfaction with services provided, facilities and staff. Participants were asked to rate quality of healthcare services, condition of the facility, and performance of all categories of staff (doctors, nursing personnel, clerical staff and allied health staff) using the Likert scale excellent, very good, good, fair or poor. Quality of life was assessed using the Short Form 12 (SF-12 Version 2.0) questionnaire. This SF-12 is a shortened version of the popular Short Form 36 (SF-36) (18). The SF-12 measures generic health concepts across age, disease and treatment groups. It is comprehensive, psychometrically sound, and reliable and produces estimates that are as precise as the SF-36 (19–27). SF-12 includes eight concepts commonly represented in health surveys: physical functioning, role functioning physical, bodily pain, general health, vitality, social functioning, role functioning emotional and mental health. Results are expressed in terms of two meta-scores: the Physical Component Summary (PCS) and the Mental Component Summary (MCS). The SF-12 is designed for self-administration and can be completed in a few minutes without assistance. Each question is rated on a five-level Likert type based scale. A higher SF-12 score is indicative of better functioning. The eight scales and two summary measures were obtained by entering the response for each item into a specialized norm-based scoring programme. The reference population is the general United States (US) population. In this norm-based system, all scales and summary scores have a mean score of 50 and a standard deviation of 10. Thus, scores greater than 50 represent above average health status while those with scores of 40 function at a level lower than 84% (less than 1 standard deviation) of the general US population (28, 29).

Statistical Analysis

The eight scales and two summary measures were obtained by entering the response for each item into a specialized scoring programme. These scores together with the response from the client satisfaction and socio-demographic items were entered into the computer for data analysis using the Statistical Package for the Social Sciences (SPSS version 11 for Windows). Prior to analyses, data were checked for errors and deviation from normality. Statistical analyses consisted of summary statistics such as mean and frequencies. Analysis of variance was used to determine mean differences among groups. Bonferroni analyses were used to identify the groups which were significantly different. Pearson correlation was used to show the relationship between patient satisfaction and quality of life scores.

RESULTS

There was a response rate of 100% of each item on the questionnaire. Table 1 shows the socio-demographic charac-

Table 1: Characteristics of study participants

Characteristics	
Age group (%)	
41–50 years	26.5
51–60 years	34.5
61–70 years	30.5
71+ years	8.5
Gender (%)	
Female	71.0
Male	29.0
Disease status (%)	
High blood pressure	54.0
Diabetes mellitus	81.5
Arthritis	20.5
Lower back pain	26.0
Poor circulation	23.0
Heart disease	6.5
Frequency of clinic attendance per year (Mean " SD)	3.66 " 0.78
SF-12 Scales and Summary Scores (Mean " SD):	
Physical functioning (PF)	43.1 " 9.5
Role functioning physical (RP)	42.4 " 7.1
Bodily pain (BP)	47.9 " 9.2
General health (GH)	38.3 " 5.9
Vitality (VT)	42.0 " 8.4
Social functioning (SF)	47.5 " 7.1
Role functioning emotional (RE)	46.8 " 8.1
Mental health (MH)	49.7 " 8.1
Physical component summary (PCS)	39.1 " 8.9
Mental component summary (MCS)	47.3 " 8.7

teristics of participants. The majority (74.5%) of participants were over 50 years old and female (71%). Hypertension and diabetes mellitus were the two most common illnesses afflicting participants. On average, participants visited the index health facilities four times per year. All SF-12 scales and summary scores were less than the mean (50) of the General United States population. The average PCS and MCS for participants was 39.1 (SD = 8.9) and 47.3 (SD = 8.7) respectively. In addition, the mean GH and PSC scores were less than one standard deviation of the mean of the US

general population. There were no significant gender differences in PCS and MCS.

Table 2 shows client perception of the quality of healthcare services provided by public health clinics in South

Table 2:   Client perception of the quality of healthcare services provided by public health in South Trinidad

	Excellent to Good (%)	Poor to Fair (%)
1. Difficulty with making appointment	64.0	36.0
2. Treated courteously	64.0	36.0
3. Greeted and attended to promptly	59.5	40.5
4. Office staff polite and helpful	66.5	33.5
5. Nursing staff polite and helpful	68.0	32.0
6. During visit physician/nurse adequately explained my illness and treatment options	54.5	45.5
7. My physician/nurse took enough time with me, told me what I needed to know, and answered my questions thoroughly	53.0	47.0
8. Waiting time to see my physician/nurse was reasonable	46.5	53.5
9. Receptionist or clerk explained any delay in seeing my physician/nurse	42.5	57.5
10. Use of prescribed medication is adequately explained by pharmacist/ doctor/nurse.	62.0	38.0
11. Overall rating: doctor	67.5	32.5
12. Overall rating: nurse	68.5	31.5
13. Overall rating: support staff	66.5	33.5
14. Overall rating: clinic experience	58.5	41.5
15. Overall rating of the facilities	79.0	21.0
16. Overall rating of the visits	70.5	29.5

Trinidad. Approximately two-thirds of participants rated treatment and courtesies of staff as good to excellent. Approximately half of the participants (54%) rated their communication experience with doctors and nurses concerning their illnesses and treatments as good to excellent. Over half of the participants gave a poor to fair rating for both the waiting time to see a physician/nurse as well as the explanations given for the delays in the starting times of clinics. Sixty-two per cent of participants gave a rating of good to excellent for the adequacy of explanations on the use of prescribed medications given by pharmacists, doctors and nurses at clinic visits. Overall, two-thirds of participants gave a rating of good to excellent on the overall performance of clinic staff. Approximately 59% of participants gave a good to excellent rating on their clinic experience. Seventy-nine per cent of participants gave a good to excellent rating on the physical facilities at the clinic while 70.5% of them rated clinic visits as good to excellent.

Table 3 shows summary of correlations between patient satisfaction and quality of life items. Overall rating of clinic visits was significantly positively associated with all SF-12 scales and summary scores. With the exception of PF and GH scores, overall rating of clinic experiences was positively associated with SF-12 scales and summary scores. Overall rating of doctors and nurses was significantly positively associated with PCS but not MCS. In addition, overall rating of support staff was significantly positively associated with both PCS and MCS. Furthermore, PCS was significantly positively associated with 12 out of the 14 items assessing quality of services.

Table 4 shows SF-12 scales and summary scores by number of diagnosed illnesses. Persons with three or more diagnosed illnesses had significantly lower scores on SF-12

Table 3:   Correlation of patient satisfaction items with SF-12 scales and summary scores.

	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Difficulty with making appointment	+.052	+.133	+.130	+.128	+.138	+.204(**)	+.104	+.073	+.137	+.116
Treated courteously	+.013	+.097	+.111	+.047	+.004	+.152(*)	+.053	+.087	+.070	+.087
Greeted and attended to promptly	+.067	+.136	+.190(**)	+.129	+.093	+.140(*)	+.120	+.159(*)	+.140(*)	+.146(*)
Office staff polite and helpful	+.065	+.245(**)	+.159(*)	+.160(*)	+.191(**)	+.165(*)	+.115	+.136	+.204(**)	+.140(*)
Nursing staff polite and helpful	+.140(*)	+.251(**)	+.152(*)	+.197(**)	+.197(**)	+.193(**)	+.145(*)	+.111	+.248(**)	+.131
Nurse/physician adequately explain illness and treatment options	+.206(**)	+.244(**)	+.150(*)	+.169(*)	+.171(*)	+.150(*)	+.153(*)	+.116	+.248(**)	+.104
Waiting time to see nurse/ physician was reasonable	+.106	+.147(*)	+.175(*)	+.120	+.145(*)	+.166(*)	+.197(**)	+.151(*)	+.157(*)	+.174(*)

Table 3: Correlation of patient satisfaction items with SF-12 scales and summary scores (cont'd)

	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Receptionist or clerk explained any delay in seeing the nurse/physician	+.077	+.188(**)	+.149(*)	+.059	+.117	+.098	+.103	+.059	+.176(*)	+.064
Use of prescribed medication is adequately explained by pharmacist	+.158(*)	+.229(**)	+.142(*)	+.096	+.171(*)	+.185(**)	+.113	+.091	+.227(**)	+.098
Overall rating: doctor	+.089	+.245(**)	+.078	+.138	+.222(**)	+.173(*)	+.144(*)	+.037	+.208(**)	+.092
Overall rating: nurse	+.114	+.200(**)	+.099	+.123	+.107	+.143(*)	+.125	+.072	+177(*)	+.077
Overall rating: support staff	+.127	+.154(*)	+.074	+.108	+.194(**)	+.128	+.115	+.136	+.146(*)	+.145(*)
Overall rating: experience at the office	+.096	+.172(*)	+.179(*)	+.127	+.175(*)	+.171(*)	+.184(**)	+.184(**)	+.165(*)	+.197(**)
Overall rating of clinic visits	+.180(*)	+.296(**)	+.188(**)	+.230(**)	+.227(**)	+.254(**)	+.216(**)	+.215(**)	+.280(**)	+.224(**)

* significance $p < .05$ ** significance $p < 0.01$

Table 4: Quality of life scores by co-morbidities (Mean (SD)

Quality of Life Profile	Client's with 1 Disease (1) n = 72	Client's with 2 Diseases (2) n = 66	Client's with 3 or more Diseases (3) n = 62	p value	Difference among groups
Physical functioning (PF)	44.8 ± 8.5	44.8 ± 9.7	39.4 ± 10.3	0.005	1,2 > 3
Role limitation due to physical problems (RP)	45.5 ± 8.1	41.4 ± 10.1	39.8 ± 10.7	0.003	1 > 2, 3
Bodily pain (BP)	51.1 ± 8.7	48.8 ± 9.6	43.3 ± 9.5	<0.001	1,2 > 3
Social functioning (SF)	49.2 ± 7.5	47.4 ± 8.9	45.5 ± 9.1	0.04	1 > 3
General (GH) health	39.8 ± 5.8	38.4 ± 6.1	36.6 ± 5.8	0.008	1 > 3
Role limitation due to emotional problems (RE)	48.3 ± 6.7	46.7 ± 7.9	45.1 ± 8.4	0.05	1 > 3
Vitality (VT)	44.5 ± 8.6	42.2 ± 8.6	38.9 ± 7.9	<0.001	1 > 3
Mental (MH)health perception	51.3 ± 6.7	49.7 ± 8.4	47.8 ± 9.3	0.05	1 > 3
Physical component summary score (PCS)	43.9 ± 7.4	41.0 ± 9.3	36.7 ± 10.3	<0.001	1,2 > 3
Mental component summary score (MCS)	50.8 ± 7.6	48.8 ± 9.5	46.9 ± 10.1	0.05	1>3

scales and summary measures than those diagnosed with one illness. In addition, patients diagnosed with three or more illnesses had PF, RP, GH, MH and PCS scores that were in excess of one standard deviation below the mean. In regression analyses controlling for age, gender, number of illnesses and type of illnesses, ratings of clinic experience and all categories of clinic staff were significantly associated with SF-12 mental and physical component summary scores ($p < 0.05$).

DISCUSSION

Findings from this study at two public health clinics in South Trinidad suggest that one-third of participants gave ratings to quality of services and overall clinic experience that might be deemed unsatisfactory. More specifically, patients gave higher ratings on the physical condition of facilities and lower ratings on issues related to communication. The fact that the participants were regular attendees at these clinics might suggest a long term perception of the relevant issues. Thus, clinic staff-client communication seems to play a major role in patient satisfaction. Several studies have shown that effective communication with patients in the clinic setting improves compliance with treatments, ability to cope with serious illnesses and overall quality of life (30–36). Based on the findings, there is the need for improved communication between clinic staff and patients. Strategies employed should incorporate the ideas or health beliefs of the patient and go beyond the mere receipt of instructions (37–39).

Another important finding was the consistent associations between satisfaction and quality of life scales and summary scores. In fact, all of the items used to gauge patient satisfaction were significantly associated with at least one SF-12 scale and summary score. However more importantly were findings that suggest that overall rating of the clinic visits was highly significantly associated with nine of the ten SF-12 scales and summary scores. These corroborated with the findings of a myriad of studies and suggest that in this population patient satisfaction might be a good marker for subjective health perception (40, 41). The positive nature of these associations might suggest a role for improved quality of services in the realization of favourable health and treatment outcomes. The finding of poor subjective quality of life among persons with multiple illnesses is similar to that of other studies and suggests the need for regular monitoring and evaluation of those persons at increased risk for poorer perceived health. These become more important when it is realized that subjective quality of life can predict morbidity and mortality (42–46).

In this study, patient perceptions of clinical proficiency (*ie* the nature of diagnostic test performed, competency of healthcare personnel) were not addressed. Notwithstanding, patient satisfaction (independent of clinical proficiency) is an important determinant of compliance with treatment and by extension a measure of the efficacy and efficiency of health-

care delivery (7–10). Another limitation is the fact that the study focussed on regular attendees and do not reflect the opinions of persons who might use these facilities occasionally. Additionally, the cross-sectional nature of the study reflects associations rather than cause and effect relationships. Finally, the validity of the questionnaire was not assessed in this population. This has the potential to result in errors in the estimation of SF-12 scales and summary scores. These errors might result from the different cultural and ethnic issues surrounding the assessment of physical and mental functioning between the referent population and our population. Additionally, issues associated with socio-economic status and cognition are known to influence SF-12 estimates (47). Notwithstanding, the summary measure (PCS = 41.5; MCS = 50.1) for persons with diabetes mellitus is similar in magnitude to that of other studies and suggests that these illnesses carry greater dysfunction in the physical than psychological domain of health. (48–51).

In summary, in this sample of regular clinic attendees, rating of services, staff and clinic experiences were positively associated with subjective quality of life. These findings remained after controlling for the effects of age, gender and number and types of diagnosed illnesses.

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