

# Satisfaction with Pharmacy Services and its Relationships with the Control of Selected Chronic Diseases

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## ABSTRACT

**Objective:** To assess the level of satisfaction with pharmacy services and whether satisfaction/dissatisfaction had any effect on two common chronic diseases. Proper control of chronic diseases requires a management regime which includes promotive, preventive, curative and rehabilitative services through primary, secondary and tertiary preventive intervention measures and a wide range of support services.

**Methods:** A cross-sectional descriptive study with both quantitative and qualitative components was designed to collect data from among all diabetic and hypertensive patients (n = 150) attending 3 health centres in the parish of St Thomas on the days that data were being collected. The questionnaires were interviewer administered. Qualitative data were obtained from focus group discussions which explored themes related to the objectives.

**Results:** Though there was overall satisfaction with the pharmacy services studied, the level of control of the two diseases was unsatisfactory. There was no relationship between hypertension control and satisfaction with pharmacy services while the relationship with diabetes mellitus control was limited to a very weak negative association with the rating of the pharmacists' instructions on how to take the prescribed medications.

**Conclusion:** "Satisfactory Pharmacy Services" could be improved by the employment of additional staff, improvement in how drugs are stocked, greater availability of generic drugs and more utilization of health cards.

**Keywords:** Chronic diseases, patient satisfaction, pharmacy services

# La Satisfacción con los Servicios de Farmacia y sus Relaciones con el Control de Enfermedades Crónicas Seleccionadas

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## RESUMEN

**Objetivo:** Evaluar el nivel de satisfacción con los servicios de farmacia, e investigar si la satisfacción o la insatisfacción tienen algún efecto en dos enfermedades crónicas comunes. El control apropiado de las enfermedades crónicas requiere un régimen de tratamiento que incluye servicios promovedores, preventivos, curativos y rehabilitadores a través de medidas de intervención preventiva primaria, secundaria y terciaria, así como una amplia variedad de servicios de apoyo.

**Métodos:** Se diseñó un estudio descriptivo transversal con componentes cuantitativos y cualitativos, a fin de recopilar datos de entre todos los pacientes diabéticos e hipertensos (n = 150) que asistían a 3 centros de salud en el distrito de Saint Thomas en los días en que se recogían los datos. Las encuestas fueron aplicadas por el entrevistado. Se obtuvieron datos cualitativos de discusiones de grupo focal, en las que se exploraban temas relacionados con los objetivos.

**Resultados:** Aunque había satisfacción global con los servicios de farmacia estudiados, el nivel de control de las dos enfermedades fue poco satisfactorio. No había ninguna relación entre el control de

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*la hipertensión y la satisfacción con los servicios de farmacia, en tanto que la relación con el control de la diabetes mellitus se limitó a una asociación negativa muy débil con la evaluación de las instrucciones de los farmacéuticos sobre cómo tomar los medicamentos prescritos.*

**Conclusión:** "Los Servicios Satisfactorios de Farmacia" podrían mejorar mediante la introducción de personal adicional, el mejoramiento en cuanto a cómo organizar el almacén de medicamentos, mayor disponibilidad mayor de medicamentos genéricos, y más utilización de tarjetas de salud.

**Palabras claves:** Enfermedades crónicas, satisfacción del paciente, servicios de farmacia

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## INTRODUCTION

Patient satisfaction is a measure of how well pharmacy services meet the needs of patients in acquiring their medications (1). Traditionally, the purpose of pharmacies has been to make medications available. The modern pharmacy, however, also provides access points to consumers and assures drugs safety and compliance with legal and professional standards. The pharmacist also handles interpersonal relationships required at the interface of the pharmacy system and the ultimate consumer, the patient (2).

In Jamaica, many patients obtaining medications from pharmacies are assisted by health cards issued by the Government. These cards include the National Health Fund (NHF), Jamaica Drugs for the Elderly Programme (JADEP), Programme of Advancement through Health and Education (PATH) and National Insurance Scheme (NIS) Gold Cards.

Persons qualify for access to these cards based on different criteria:

**JADEP** is available to persons over 60 years old and covers 10 chronic illnesses including hypertension and diabetes mellitus (3).

**NHF** is available to persons of any age with any of 15 conditions inclusive of hypertension and diabetes mellitus (4).

**PATH** allows persons to receive medications free of cost at government pharmacies and is available to persons deemed in need of assistance by the Government (5).

**NIS** Gold Card is a health plan for NIS pensioners who made contributions to the country's NIS scheme (6).

Private health insurance cards are also used by patients to access pharmacy services.

The Government of Jamaica introduced the idea of Drug Serv Pharmacy in 2002 to replace the usual health centre pharmacy services. Previously at the government health centres, patients could fill their entire prescriptions for a fee of \$50 (Jam) regardless of how many items were on the prescription.

With the Drug Serv Pharmacy, the patient had to pay per item; those unable to pay for their medications were sent to an Assessment Officer to determine whether they qualified for assistance. Those who qualified for assistance received their medications and a bill was sent to the Health Depart-

ment for those medications so that Drug Serv could be reimbursed.

At the St Thomas Parish Health Centre monthly clinical meetings, it was noted that there were consistent complaints of dissatisfaction with the pharmacy services and increasing difficulties to achieve reasonable levels of control among their hypertensive and diabetic patients with reference to the traditional indicators/measures of such control, *ie* blood pressure levels and blood glucose levels.

Johnson *et al* 1999 (7) noted that there was a recognition that a positive association existed between satisfaction with medical care and perceived health status; from this he hypothesized that a relationship should exist between patient satisfaction with pharmacy services and patient health. He admitted though, that in his literature review of the subject, he found no studies showing an association between pharmacy care satisfaction and general health status.

This study sought to find out whether there was any relationship between patient satisfaction with the pharmacy services and the level of control of patients with hypertension and diabetes mellitus who attended clinics and received their medications from pharmacies linked to these clinics.

## MATERIAL AND METHODS

A cross-sectional descriptive study with both quantitative and qualitative components was designed to collect data from among all persons attending three health centres in the parish of St Thomas who met prior inclusion criteria on the days that data were being collected. The questionnaires were interviewer administered after pretesting and appropriate adjustments. The final sample size was 150 (39 males and 111 females). Each of the three health centres selected provided a different type of pharmacy service, *ie* on site, Drug Serv and referral to another facility for pharmacy services, to obtain medications for their hypertension and/or diabetes mellitus.

Qualitative data were obtained from focus group discussions which explored themes related to: pharmacy experiences and satisfaction, pharmacy effect on their conditions, and means and timing of improvement of pharmacy services. Quantitative data were analysed using the Statistical Packages for the Social Sciences (SPSS) version 12

software. Qualitative data were analysed using the Framework Approach.

## RESULTS

The total number of patients interviewed was 150 (Table 1). There were 50 persons each from the Trinityville, Morant

Table 1: Sociodemographic characteristics of study participants

	Males % (n)	Females % (n)	Total
Gender:	26.0 (39)	74.0 (111)	100.0 (150)
Age: yrs			
Mean $\pm$ SD	65.44 $\pm$ 11.96	61.51 $\pm$ 14.15	62.53 $\pm$ 13.69
<b>Age groups (yrs)</b>			
% (n)			
< 50	7.7 (3)	21.6 (24)	18.0 (27)
50–59	28.2 (11)	18.9 (21)	21.3 (32)
60–69	20.5 (8)	22.5 (25)	22.0 (33)
70–79	35.9 (14)	30.6 (34)	32.0 (48)
$\geq$ 80	7.7 (3)	6.3 (7)	6.7 (10)
<b>Employment: % (n)</b>			
Yes	41.0 (16)	28.2 (31)	31.5 (47)
No	59.0 (23)	71.8 (79)	68.5 (102)

Bay and Yallahs health centres; 74.0% were females and 26.0% were males. The mean age for the respondents was 62.53  $\pm$  13.69 years with a median of 65.0 years. The mean age of males (n = 39) was 65.44  $\pm$  11.96 years with a median of 67.0 years and for females (n = 111), the mean was 61.51  $\pm$  14.15 years with a median of 63.0 years.

Both genders had maximum respondents in the age group 70–79 years, males with 35.9% (n = 14) and females with 30.6% (n = 34). Overall, 32% (n = 48) were 70–79 years old. The majority of participants (68.5%) were unemployed.

Table 2 shows that 81.3% (n = 122) had hypertension either alone or with another illness and 26.7% (n = 40) had both hypertension and diabetes with or without other illnesses. Of those with hypertension (n = 120, missing = 2), the mean number of years they were diagnosed was 8.42  $\pm$  8.66 years with a median of 7.00 years. Of the participants in the study, just over half (52.0%, n = 77, missing = 2) reported having a health card. Information on lack of health card possession was incomplete for two persons.

Concerning use of pharmacy services, the majority of persons used two pharmacies (49.0%, n = 73, missing = 1). Most persons used between one to three pharmacies (96.6%). The most frequently used pharmacy was the Yallahs health centre pharmacy (28.0%, n = 150); 69.3% (n = 104) of participants used Government owned pharmacies as compared to 30% (n = 46) who used privately owned pharmacies.

Table 3 shows that 51.3% of the participants agreed that drugs were always available at both government and private pharmacies while 25.3% confirmed that this was so “most times”. The remaining patients’ (23.3%) response was

Table 2: Characteristics of hypertensive and diabetic respondents by sociodemographic status and health card possession

	Hypertensive	Diabetic	Diabetic/ Hypertensive
<b>Gender: % (n)</b>			
Males	31.7 (26)	17.9 (5)	20.0 (8)
Females	68.3 (56)	82.1 (23)	80.0 (32)
<b>Age groups (yrs)</b>			
% (n)			
< 50	18.3 (15)	32.2 (9)	7.5 (3)
50–59	15.9 (13)	25.0 (7)	30.0 (12)
60–69	24.4 (20)	10.7 (3)	25.0 (10)
70–79	33.7 (27)	32.1 (9)	30.0 (12)
$\geq$ 80	8.5 (7)	0.0 (0)	7.5 (3)
<b>Health card possession*: % (n)</b>			
JADEP	12.2 (10)	7.4 (2)	15.8 (6)
NIS Gold	11.0 (9)	0.0 (0)	17.5 (7)
NHF	23.2 (19)	33.3 (9)	48.7 (19)
PATH	11.0 (9)	0.0 (0)	10.0 (4)
Private	1.2 (1)	7.4 (2)	0.0 (0)
None	53.7 (44)	55.6 (15)	30.8 (12)

\*JADEP – Jamaica Drugs for the Elderly Programme; NIS Gold – National Insurance Scheme; NHF – National Health Fund; PATH – Programme of Advancement through Health and Education; Private – Private Health Card.

Table 3: Types of pharmacy by rating of availability and affordability

	Type of Pharmacy		Total % (n)
	Government % (n)	Private % (n)	
<b>Drug availability:</b>			
Always	44.2 (46)	67.4 (31)	51.3 (77)
Most times	26.9 (28)	21.7 (10)	25.3 (38)
Sometimes	28.8 (30)	10.9 (5)	23.3 (35)
<b>Affordability of drug:</b>			
Affordable	52.9 (54)	50.0 (22)	52.1 (76)
Too expensive	45.1 (46)	47.7 (21)	45.9 (67)
Not sure	2.0 (2)	0.7 (1)	2.1 (3)

that there was wide variation. On the question of affordability, 52.1% thought that the drugs were affordable whereas 45.9% thought that they were too expensive.

In Table 4, the surveyed services provided through the pharmacies showed that at least half of the respondents were satisfied in every category of the eleven service areas.

Excellent/good satisfaction ratings for the various services, in ascending order, were:

- \* Told about side-effects/complications – 49.3%
- \* Privacy/confidentiality of conversations – 50%
- \* Interested in patients’ health – 56.7%

Middle range scores were achieved for the following:

- \* Adequacy of instructions on how to take medications – 60.4%
- \* Information about purpose of medications – 66.4%
- \* Helping patients to manage their supplies of medicine – 66.4%

Table 4: Satisfaction with pharmacy services

Services	Rating of performance of services		
	Excellent/Good	Unsure/Poor	No response
Providing information which influenced compliance	68.5% (120)	2% (3)	29.5% (45)
Helping patients to manage their supplies of medicines	66.4% (99)	14.1 % (21)	19.5% (30)
Spent adequate time with patients	77.2% (115)	–	22.8% (35)
Medications received within ½ hour	72.7% (109)	–	–
Professional approach by pharmacy staff to their duties	90% (135)	10% (15)	–
Staff available to answer questions	84.5% (125)	15.5% (25)	–
Adequate instructions given on how to take medications	60.4 % (90)	–	–
Information given about purpose of the medication	66.4% (100)	33.6% (50)	–
Told about side effects and/or complications of their medications	49.3% (74)	50.7% (76)	–
Interested in patients' health	56.7% (85)	20.3% (30)	23% (35)
Ensuring that conversations were private and confidential	50.0% (75)	50% (75)	–

\* Providing information which influences compliance – 68.5%

\* Medications received within ½ hour – 72.7%

The areas achieving highest scores were:

\* Staff spending adequate time with patients –77.2%

\* Availability of staff to answer questions – 84.3%

\* Professional approach to duties – 90%

Table 5: Rating of overall quality of service

	Frequency % n	Cumulative frequency %
Excellent	48.7 (73)	48.7
Above average	29.3 (44)	78.0
Average	16.7 (25)	94.7
Below average	0.7 (1)	95.3
Poor	2.7 (4)	98.0
Unsure	2.0 (3)	100.0

The majority of patients – 78% (n = 117) – thought that the pharmacy services were better than average or excellent while 16.7% (n = 25) thought the services were average quality. Only 3.4% thought that the service was below average or poor. This suggests general satisfaction.

### Qualitative

Satisfaction with pharmacy services meant “good service delivery” and there was general agreement that satisfaction with pharmacy services affects one’s health positively. Availability and affordability of medications were areas of

concern, as was the patient-pharmacist relationship. Patients recognised pharmacists’ resource constraints and other limitations in their working environment which made their jobs more challenging. Reluctance to accept healthcare was also noted.

### DISCUSSION

The results showed that the mean age of the persons surveyed was  $62.53 \pm 13.69$  years and that the majority were females. Life expectancy for females in Jamaica at birth is 74.0 years and that of males is 70.0 years (8). Women also have a higher health-seeking behaviour temperament, resulting in greater attendance at clinics. The respondents were mostly unemployed (68.5%); those who were working were mainly semi-skilled manual workers (52.4%). The majority (51.3% n = 77) had at least one health card – the National Health Fund (NHF) [31.8% n = 47] being the most frequently possessed. This is possibly due to the Government’s drive to educate the public about the subsidization benefits of the NHF.

In the focus group discussions, however, the participants noted that some health cards, particularly the NHF and the Jamaica Drugs for the Elderly Programme (JADEP), were not being accepted by many pharmacies due to reservations as to whether reimbursements would be made in a timely manner (9).

The majority of participants (69.3%) listed government pharmacies as their primary or most often utilized service point. This is consistent with the Survey of Living Conditions (10) which noted that the majority (49.5%) of St Thomas residents utilized government pharmacies as compared to 44.9% that used private pharmacies and 5.6% that used both. Though private pharmacies had medications most of the time, the focus group discussion participants noted that the prices were too expensive.

Satisfaction with pharmacy services was assessed in terms of the interaction/relationship between staff and users. The respondents thought the pharmacy staff was professional (90%, n = 135) in carrying out their duties and showed much respect and courtesy (92%, n = 138) in their dealings with patients. This is in agreement with the Atkinson-Linton study (11) where the majority of respondents (61.4%, n = 46) stated that the pharmacist treated them well.

The pharmacists were available most of the time to answer questions (84.5%, n = 125) which they did well (82.7%, n = 124). This corresponds well with the Atkinson-Linton study (11) wherein 84% (n = 63) of respondents found that pharmacists were willing to answer questions. The majority of the participants (60.4%, n = 90) received adequate instructions on how to take their medications though 33.6% (n = 50) had not been given information about the purpose of the medication and 50.7% (n = 76) were never told about side effects or complications arising from their medications.

That the pharmacists were trying to help them get healthy or maintain their health was evidenced in the parti-

participants' minds by the pharmacists' efforts to ensure that the right medications were given and help was forthcoming with regards to managing their medications. Equally important was the fact that most participants received their medication within half hour (72.7%, n = 109). Whereas the majority of respondents noted the overall quality of services provided by the pharmacies to be better than average, those in the focus group discussion thought there needed to be marked improvement in pharmacy services – particularly among those in the public sector.

It might be expected that the quantitative data would be more negative since the anonymity of a questionnaire allows for the expression of one's true feelings as compared to focus group discussions. However, in this study, the questionnaires were administered by research assistants, some of whom were members of the health service staff; perhaps some of the respondents, despite being assured of the confidentiality of their answer, might have chosen to respond favourably, not wanting to cause any "discomfort" for the pharmacists. The focus group participants may also have felt more comfortable with their moderator to express their true feelings and concerns.

There was little control of the two conditions (as measured by the blood pressure and blood glucose levels) which the study examined, *viz* hypertension and diabetes mellitus, and no significant relationship was found between the overall rating of quality of services and the control of these two conditions. There was also no correlation between the other components of pharmacy satisfaction except for pharmacist instruction which had a weak negative correlation with diabetes mellitus control. This was in keeping with the Johnson study (7) which found no association between physical health and general pharmacy satisfaction.

Paddison (12), however, did find a relationship between patient satisfaction with pharmacy services and a lower number of reported health problems. This suggests that the more health problems one had, the more likely it was for there to be dissatisfaction with pharmacy services. However, it does not say that the better the condition is controlled, the more satisfied the person is with the pharmacy services, *ie* having fewer health problems does not mean better control.

In summary, a majority of the participants expressed satisfaction with the pharmacy services as measured by:

- \* The professionalism of the staff in carrying out their duties and the level of respect and courtesy shown to them.
- \* Availability of staff to answer questions most of the times.
- \* Receipt of adequate instructions on how to take their medications and manage their supplies.

These findings based on responses from the questionnaire were in contrast to some extent, with those from the focus group discussion; however, the control noted by the researchers of the two conditions, *ie* hypertension and diabetes mellitus was found to be unsatisfactory. No significant relationship was found between the overall rating of quality of services and control of the two conditions.

## RECOMMENDATIONS

Patient satisfaction with pharmacy services can be improved by:

- \* employment of additional staff where necessary
- \* improvement in how drugs are stocked
- \* greater availability of generic preparations
- \* higher acceptance rate of health cards

Concerning better control of the two chronic diseases studied, it is recommended that there is room for enhanced health promotion activities and screening through community health fairs to address these problems at the local level.

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