Experiences and Satisfaction of Patients with Non-Communicable Diseases with Current Care in Primary Health Care Centres in Saudi Arabia

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Abstract

Primary healthcare centres (PHCs) play a pivotal role in chronic disease care and prevention and therefore in the experience and satisfaction of patients with non-communicable diseases (NCDs). This survey examined the experiences and satisfaction of 315 Patients with NCDs receiving care from PHCs. Participants were from attendees at Ministry of Health PHCs in Riyadh, Saudi Arabia. Findings indicate that most patients were satisfied with the care they received and confirmed the importance of providers’ and physicians’ communication skills in this. There was a lack of evidence of managed care, including patient involvement in disease management suggesting that steps are needed to empower patients to take a greater role in disease management. This study emphasises the important role of physicians in providing patients with information and empowering them to access community health facilities for self-managed care. This study also indicates a need to strengthen the primary health care system’s focus on care beyond PHCs.

Keywords

patient satisfaction, patient engagement, patient perspectives/narratives, quality improvement

Introduction

Non-communicable diseases (NCDs) account for over 80% of all premature deaths worldwide (1) and 73% in Saudi Arabia (2), placing an increased burden on existing health care services (3). Free, government-funded health care in Saudi Arabia allows Patients with NCDs to receive care and follow-up at no cost at government primary healthcare centres (PHCs) unless a referral is necessary for secondary care. Exploring the experiences and satisfaction of Patients with NCDs at PHCs is important because such knowledge can play a pivotal role in improving the quality of chronic care delivery and improving the experiences of Patients with NCDs. These patients require accurate information about their diseases and treatment options, access to multiple health professionals, effective coordinated care, timely attention to symptoms and timely access to evidence-based treatment. Improving patient access increases satisfaction for patients and leads to improved use of resources for health systems.

Alzaied and Alshammari (4) reported a need for improved access to PHCs and for effective chronic disease management programs at PHCs in Saudi Arabia. Similarly, Al Asmri et al (5) found a need to develop primary health care services directed at Patients with NCDs and those who are at high risk of NCDs. A national study reported low uptake of periodic health examinations in Saudi Arabia and found that most patients (73.5%) accessed PHCs only due to illness or injury (6). Two other studies in Saudi Arabia also found that most patients (65.7%, (7); 77.5%, (8) did not have routine medical check-ups.

Despite the reported need to develop primary health care services and improve access to PHCs, the findings from studies of patients attending PHCs in Saudi Arabia have
shown high rates of satisfaction with the care provided (9,10). Another study revealed that the lowest level of satisfaction among primary health care users was with accessing medical care, while the highest satisfaction was with the quality of services provided by the physicians and healthcare providers themselves (11). Patient satisfaction is an important element of the quality of health care, but few patient satisfaction studies have been undertaken in PHCs in Saudi Arabia. Therefore, we aim to explore patients’ experiences of and satisfaction with the current chronic disease care provided at PHCs. Understanding patients’ views and needs is crucial for planning and monitoring the management of NCDs within the Saudi healthcare system.

Methods

This study involved a patient survey conducted between May and July 2019 incorporating two validated survey instruments specifically designed for NCDs: the Patient Assessment of Chronic Illness Care Survey (12) and the Survey of Chronic Disease Management (13). Data on patient demographics (age, gender, educational status, occupation), place of treatment, chronic disease type and disease duration were also collected.

A total of 345 chronic disease patients attending chronic disease clinics at PHCs agreed to participate, but only 315 completed the survey and were considered in the analysis. The patients were recruited from Ministry of Health (MOH) PHCs in Riyadh, Saudi Arabia.

Only patients with NCDs were recruited for inclusion in the study. The inclusion criteria were patients likely to have at least one chronic disease and who had attended a NCDs clinic at a PHC during the previous six months. All patients meeting these criteria and attending a clinic on study days were approached to participate in the study. The patients were provided with information about the study and asked to provide written consent. Anonymous, self-report questionnaires were used to collect the data, which were analysed using the Statistical Package for the Social Sciences (SPSS) Version 25.0. Descriptive statistics, including frequencies and percentages, are reported, and logistic regression analyses were performed to identify the demographic factors associated with patients’ perceptions of chronic disease management.

Results

The final sample consisted of 315 patients. The sociodemographic and medical characteristics of the patients are presented in Table 1. The mean age of the sample was 56 years and ranged from 29 to 85, but more than half (52.4%) were aged 50–64 years. There were similar proportions of males (49.8%) and females (50.2%); more than one third were educated to graduate level (37.1%) and employed in government sector jobs (36.5%), while 15.6% were employed in the private sector. About 40% reported a monthly income above SAR 8000 which is within the Saudi average median income.

Patients reported overall good experiences when accessing healthcare services as shown in Table 2. Most indicated that they rarely or never experienced difficulty in getting specialised diagnostic tests (71.4%) or had long waiting times to receive treatment after diagnosis (72.7%). Two thirds (67.6%) indicated that they rarely or never experienced long waiting times to see a specialist, although one third (33.6%) reported attending a private hospital because of long waiting times. Most patients (76.8%) reported they never or rarely experienced difficulty in getting medications, and very few (7%) experienced delays in accessing hospital specialists because of living in remote areas.

### Table 1. Sociodemographic and Medical Characteristics of the 315 Respondents.

| Variable                  | Number | Percentage |
|---------------------------|--------|------------|
| **Age category**          |        |            |
| Below 35                  | 10     | 3.2        |
| 35–49                     | 64     | 20.3       |
| 50–64                     | 165    | 52.4       |
| 65 and above              | 76     | 24.1       |
| **Gender**                |        |            |
| Male                      | 157    | 49.8       |
| Female                    | 158    | 50.2       |
| **Level of education**    |        |            |
| Not attended              | 34     | 10.8       |
| Primary school            | 52     | 16.5       |
| High school               | 77     | 24.4       |
| Diploma                   | 29     | 9.2        |
| Graduate                  | 117    | 37.1       |
| Postgraduate              | 6      | 1.9        |
| **Occupation**            |        |            |
| Government                | 115    | 36.6       |
| Private                   | 49     | 15.6       |
| Unemployed                | 73     | 23.3       |
| Retired                   | 77     | 24.5       |
| **Monthly income**        |        |            |
| < 3000 SAR                | 60     | 19.1       |
| 3000–5000 SAR             | 44     | 14.1       |
| 5000–8000 SAR             | 84     | 26.8       |
| > 8000 SAR                | 126    | 40.0       |
| **Number of NCD’s having (n = 315)** |     |            |
| Single NCD                | 238    | 75.6       |
| Having 2 or more NCD’s    | 77     | 24.4       |
| (Among those having a single NCD) Disease (n = 238) | | |
| Cardiovascular disease    | 39     | 16.4       |
| Chronic respiratory disease | 38   | 16.0       |
| Diabetes                  | 101    | 42.4       |
| Hypertension              | 51     | 21.4       |
| Stroke                    | 5      | 2.1        |
| Other                     | 4      | 1.7        |
| **Duration of illness**   |        |            |
| 5 years or below          | 140    | 44.4       |
| 6–10 years                | 80     | 25.5       |
| 11–20 years               | 84     | 26.8       |
| > 20 years                | 10     | 3.3        |
There was little variation in responses across demographic factors when examined together in ordinal regression analysis (Table 3). Only education level had a significant independent relationship with responses to accessing healthcare services. Patients whose education level were less than the reference level of post graduate education reported less delay in accessing hospital specialist because of living in a remote area (p < 0.001). Private sector employees also reported experience less difficulties in getting medications compared to government employees (p < 0.05).

The vast majority (95.2%) of patients believed that it is important to have good personal knowledge about their condition and the overall management of their care, and (95.8%) viewed communication between hospitals and PHCs in the management of their illness as important.

Despite overall reporting of good experiences, patients reported low levels of care elements known to improve chronic disease outcomes. Over forty percent of patients (41.6%) reported not being provided by their physicians with a list of their current medications, and 54.1% reported not having written advice on how to manage their chronic illness at home. In binary logistic regression analysis, older patients were more likely than younger patients to report receiving a list of medications from physicians or specialists in the clinic (p < 0.01).

Most patients (91.1%) reported good provider–patient communication, with the provider asking them how their visits with other doctors were going, and 75.5% of patients were asked by their physicians how their work, family or social situations related to taking care of their illnesses. Most patients (91.7%) felt that their values and traditions were considered by nurses and doctors when recommending treatments, and 68.2% reported being given treatment choices to think about. Most patients (78.7%) reported satisfaction with the organisation of their care over the previous six months.

Despite this high level of satisfaction with care, the study found that almost a third of patients (31.7%) reported almost never or generally not expressing their ideas or goals when making a treatment plan. Similarly, 37.7% of patients reported almost never or generally not asking to talk about their goals in caring for their illness. Further, 52.1% of patients reporting they were not advised to attend a group or class to cope with their chronic illness and 39.6% reporting they were not helped to make plans for how to get support from friends, family, or community. Almost half of patients (47.5%) indicated not being given a book or monitoring log in which to record the progress they were making, and almost a third (30.1%) were not given a written list of things they could do to improve their health.

Most patients (79.4%) were receiving treatments from chronic disease clinics at the PHCs. There was a strong preference for chronic disease management within PHCs (57.5%), with only 18.4% preferring management in government hospital settings, and 24.1% preferring management in private hospitals. The rationale given for their preferences were good care (69.2%) and less waiting time (29.8%).

### Discussion

Health services in Saudi Arabia have developed over the last two decades to ensure better health care for patients. (14) As part of continuing improvement in quality and outcomes of healthcare, it is essential to assess patient experiences of and satisfaction with the quality of service in PHCs. (15,16) Patient satisfaction is an important measure of health care efficacy and quality. (17,18) No research has been conducted to explore patients with NCDs’ perceptions of chronic disease care in Saudi Arabia, and this study sought to determine the experiences of and satisfaction with current chronic disease care provided by government PHCs.

The findings show overall good patient experiences when accessing healthcare services but importantly elements of chronic disease management known to improve patient satisfaction, engagement and outcomes were not reported by a significant proportion of the sample. These include patients being asked to express their ideas or goals when making a treatment plan and to talk about their goals in caring for their illness and being advised to attend a group or class to cope with their chronic illness and engaging friends, family, or community in care. Other examples of underreported evidence-based care included advice and aids for recording self-monitored progress and being provided with written list of self-care activities. These empowerment strategies and consistently involving patients in healthcare decisions lead to better patient involvement, motivation and commitment as well as to stronger partnerships with patients and increased collaborative goalsetting. Patient-centred care is considered a key component of a health system, ensures that all patients have access to the information that works best for them (19) and results in better health outcomes.

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| Table 2. Patients’ Experiences When Accessing Healthcare Services. |
|---------------------------------------------------------------|
| **Never** | **Rarely** | **Sometimes** | **Often** |
| Difficulty getting medications. | 84 (26.7%) | 158 (50.2%) | 72 (22.9%) | 1 (0.3%) |
| Difficulty getting specialised diagnostic tests (eg, x-ray, Ultrasound, CT/MRI imaging) | 98 (31.1%) | 127 (40.3%) | 72 (22.9%) | 18 (5.7%) |
| Long waiting times to see a specialist in hospital. | 94 (29.8%) | 119 (37.8%) | 87 (27.6%) | 15 (4.8%) |
| Long waiting times to receive treatment after diagnosis. | 116 (36.8%) | 113 (35.9%) | 80 (25.4%) | 6 (1.9%) |
| Attending private hospital because of long waiting time in public hospital. | 97 (30.8%) | 112 (35.6%) | 86 (27.3%) | 20 (6.3%) |
| Delay in accessing hospital specialist because of living in a remote area. | 25 (79.7%) | 42 (13.3%) | 19 (6%) | 1 (1%) |
| Independent Variable   | Difficulty getting medications OR (95% CI) | Difficulty getting specialised diagnostic tests OR (95% CI) | Long waiting times to see a specialist in hospital OR (95% CI) | Long waiting times to receive treatment after diagnosis OR (95% CI) | Attending private hospital because of long waiting time in public hospital OR (95% CI) | Delay in accessing hospital specialist because of living in a remote area OR (95% CI) |
|------------------------|---------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------|
| Gender (Reference - Male) |                                             |                                                             |                                                               |                                                                 |                                                                                   |                                                                  |
| Female                 | 0.31 (−0.22 to 0.83)                        | 0.23 (−0.28 to 0.74)                                       | −0.09 (−0.59 to 0.42)                                         | 0.21 (−0.30 to 0.72)                                            | 0.51 (0.02 to 1.01)*                                                        | 0.06 (−0.64 to 0.76)                                                |
| Age (Reference – 65 and above) |                                             |                                                             |                                                               |                                                                 |                                                                                   |                                                                  |
| Under 35               | 0.75 (−0.83 to 2.33)                        | 1.01 (−0.51 to 2.53)                                       | 0.13 (−1.38 to 1.64)                                         | −0.37 (−1.89 to 1.15)                                          | 1.20 (−0.32 to 2.73)                                                        | 1.84 (−0.06 to 3.73)                                                |
| 35–49                  | 0.58 (−0.38 to 1.54)                        | 0.51 (−0.42 to 1.44)                                       | 0.55 (−0.37 to 1.48)                                         | −0.39 (−1.32 to 0.54)                                          | −0.12 (−1.03 to 0.80)                                                        | 1.48 (0.14 to 2.82)*                                                |
| 50–64                  | 0.39 (−0.32 to 1.10)                        | 0.23 (−0.46 to 0.91)                                       | −0.05 (−0.73 to 0.63)                                        | −0.66 (−1.36 to 0.03)                                          | 0.17 (−0.85 to 0.52)                                                        | 0.75 (−0.33 to 1.84)                                                |
| Education (Reference – Postgraduate) |                                             |                                                             |                                                               |                                                                 |                                                                                   |                                                                  |
| Not attended primary school | 0.34 (−1.55 to 2.24)                        | 0.47 (−1.38 to 2.33)                                       | 0.46 (−1.37 to 2.29)                                         | 0.95 (−1.01 to 2.91)                                            | −0.68 (−2.50 to 1.13)                                                        | 16.56 (15.04 to 18.07)**                                             |
| Primary school         | −0.16 (−1.96 to 1.64)                       | 0.43 (−1.34 to 2.19)                                       | 0.34 (−1.40 to 2.08)                                         | 1.19 (−0.68 to 3.06)                                           | −0.89 (−2.61 to 0.83)                                                        | 15.84 (14.58 to 17.12)**                                             |
| High school            | −0.14 (−1.82 to 1.55)                       | 0.55 (−1.10 to 2.21)                                       | 0.42 (−1.21 to 2.05)                                         | 1.26 (−0.51 to 3.03)                                           | −0.98 (−2.60 to 0.63)                                                        | 15.64 (14.66 to 16.62)**                                             |
| Diploma                | −0.63 (−2.38 to 1.13)                       | 0.51 (−1.21 to 2.23)                                       | 0.35 (−1.34 to 2.04)                                         | 1.20 (−0.62 to 3.03)                                           | −0.43 (−2.11 to 1.24)                                                        | 15.43 (14.36 to 16.51)**                                             |
| Graduate               | −0.84 (−2.47 to 0.78)                       | 0.06 (−1.54 to 1.66)                                       | −0.15 (−1.71 to 1.42)                                        | 0.62 (−1.09 to 2.33)                                           | −0.73 (−2.28 to 0.82)                                                        | 15.74 (15.74 to 15.74)**                                             |
| Monthly income (Reference – > 8000) |                                             |                                                             |                                                               |                                                                 |                                                                                   |                                                                  |
| < 3000                 | 0.25 (−0.67 to 1.18)                       | 0.55 (−0.35 to 1.45)                                       | 0.82 (−0.08 to 1.70)                                         | 0.48 (−0.41 to 1.38)                                           | −0.14 (−1.04 to 0.75)                                                        | 0.74 (−0.60 to 2.09)                                                |
| 3000–5000              | 0.80 (−0.08 to 1.67)                       | 0.51 (−0.34 to 1.35)                                       | 0.39 (−0.45 to 1.23)                                         | 0.11 (−0.73 to 0.95)                                           | 0.47 (−0.37 to 1.30)                                                        | 1.47 (−0.26 to 2.67)                                                |
| 5000–8000              | 0.50 (−0.11 to 1.10)                       | 0.29 (−0.30 to 0.87)                                       | 0.43 (−0.15 to 1.01)                                         | 0.25 (−0.33 to 0.84)                                           | 0.43 (−0.15 to 1.00)                                                        | 0.08 (−0.81 to 0.97)                                                |
| Occupation (Reference – unemployed) |                                             |                                                             |                                                               |                                                                 |                                                                                   |                                                                  |
| Government             | 0.11 (−0.62 to 0.84)                       | −0.02 (−0.74 to 0.76)                                      | 0.41 (−0.30 to 1.11)                                         | 0.49 (−0.23 to 1.20)                                           | −0.11 (−0.82 to 0.59)                                                        | 0.27 (−0.84 to 1.39)                                                |
| Private                | −0.80 (−1.54 to −0.16)                     | −1.03 (−1.75 to −0.54)                                     | 0.12 (−0.59 to 0.84)                                         | −0.82 (−1.54 to 0.10)                                          | −0.42 (−1.47 to 0.62)                                                        |                                                                  |

OR = Odd Ratio from ordinal regression analysis; (95% CI) = 95% confidence interval; * P < 0.05, ** P < 0.001. N = 315.
Our findings are consistent with those of Aljuaid et al (14), who reported that a lack of information provided to patients was a key factor hindering optimal delivery of patient-centred care in Saudi Arabia; they also align with similar results reported in studies conducted in various clinical settings both globally and across Saudi Arabia, which suggest that more patient health education is needed to improve the quality of care and to combat the epidemic of chronic diseases and living conditions. Effective communication enhances patient satisfaction and health outcomes, and highlights the importance of communication skills, such as respect for patients and knowing about patients and their preferences for PHCs included patient communication (30,31).

The overall patient satisfaction in this study (78.8%) with care provided by PHCs is comparable to rates reported in previous studies in Saudi Arabia (9,11,35). This could be due to the similar context, as these studies also took place in various PHC settings, and PHC patients may have similar perceptions of care. However, a recent report from the MOH gave an overall patient satisfaction rate with PHCs of 80.8% (36), which is higher than the rate observed in our study. However, this MOH study sampled all patients and highlights the importance of communication skills, such as respect for patients and knowing about patients and their preferences for PHCs included patient communication (30,31).

The study shows high satisfaction among patients with NCDs on aspects of the organisation of their care (Table 4). This is evident from patients reporting high rates of being asked about how their visits with other doctors were going, how their illness affected their lives and the extent to which they felt that their values and traditions were considered by nurses and physicians when recommending treatments. Overall patient satisfaction was therefore associated with providers’ and physicians’ communication skills. This aligns with findings of a strong correlation between overall patient satisfaction and physician–patient communication (30,31) and highlights the importance of communication skills, such as respect for patients and knowing about patients’ diseases and living conditions. Effective communication between health providers and patients has the potential to enhance patient satisfaction and health outcomes, and several studies have demonstrated that patients’ satisfaction plays a role in compliance with medical advice, follow-ups and even improvements in health (32–34).

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In this study, most patients preferred their chronic conditions to be managed at PHCs and wanted to utilise PHCs in future. There are likely two reasons for this: overall good experiences and satisfaction when accessing healthcare services and that PHC services are free. Our findings are consistent with global studies that reported that the factors contributing to patients’ preferences for PHCs included shorter waiting times and access when care is needed (37,38).

Another contributory reason may be the high expectations of government facilities. Health care services at government PHC facilities are provided for free, and free government-
funded care dominates in Saudi Arabia, so most patients have always used PHCs and have not had private health insurance or access to private care. The results should therefore be viewed considering this, as this study represent government PHCs only.

The rate of overall satisfaction may also have benefited from recent developments in digital support services at PHCs. In 2019, (MOH) implemented an electronic health records system in all PHCs as part of measures to improve their performance in chronic disease management (39). Health technology has been treated as a top priority for the health service under the Saudi Vision 2030 development program, resulting in several projects including “Mawid”, which is a central appointment system managed by the MOH that allows patients to book, cancel or reschedule appointments at PHCs. It allows patients to look at the nearest government PHC, resulting in increased accessibility, reduced waiting times and thus better care.

**Conclusion**

The findings of this study suggest that patients with NCDs at PHCs are satisfied with their care, which is likely significantly contributed to by providers’ and physicians’ communication skills. Consistent with this, the study found that patients reported their physicians were concerned for their values and traditions and respectful of patients and knew about their diseases and living conditions. Most patients did not experience difficulties with access to specialisation diagnostic tests, long waiting times to receive treatment after diagnosis, long waiting times to see a specialist or difficulty in getting medications. However, there is a likely shortfall in components of evidence-based comprehensive chronic disease management, particularly aspects relating to developing patient self-management, engagement and empowerment. This study suggests that physicians and PHCs need to improve programs to enhance self-management. This study also indicates a need to strengthen the primary health care system’s focus on developing supportive environments within families and communities to support patients in achieving their self-management activities.

**Author Contributions**

All authors contributed to initiating the conception and design of the study. AH conducted the data, analyzed the data, and drafted the initial manuscript. AW guided analysis, critically revised the manuscript and approved the final manuscript.

**Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Ethical Approval**

Ethical approval was obtained from the ethics committee of the Ministry of Health, Saudi Arabia (IRB log no: 2019-0028 E).

**Funding**

The author(s) received no financial support for the research, authorship, and/or publication of this article.

**Statement of Human and Animal Rights**

This article does not contain any studies with human or animal subjects.

**Statement of Informed Consent**

Written informed consent was obtained from the patient(s) for their anonymized information to be published in this article.

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