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Original Research

Patient Reported Outcome Measures of Pharmaceutical Therapy for Quality of Life (PROPMPT-QOL) among Saudi Population: A Real World Observational Study

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Abstract

Introduction: Patient-reported outcomes in pharmaceutical therapy play a crucial role in understanding medication experiences and their impact on quality of life among chronic disease patients. This study aims to explore patient-reported outcomes in pharmaceutical therapy among chronic disease patients in Saudi Arabia, with a focus on medication experiences and their impact on quality of life. **Methods:** The study utilized a cross-sectional design, collecting self-reported data from participants recruited primarily from healthcare settings. Participants completed the PROMPT-QOL questionnaire, which assessed various domains related to medication use and quality of life. **Results:** The findings revealed positive attitudes towards medication use and perceived effectiveness among participants. However, they also reported experiencing various side effects and impacts, particularly in intimate aspects of life such as sexual desire or relationships, vision, hearing, speech, and social activities. Notably, participants placed significant value on clear and comprehensive medication information, indicating the importance of patient education in promoting adherence and satisfaction. **Conclusion:** The study underscores the critical role of effective information provision and holistic patient care in optimizing pharmaceutical therapy outcomes. Healthcare providers should prioritize patient education, foster therapeutic relationships, and involve patients in shared decision-making to enhance treatment outcomes and overall quality of life for chronic disease patients. Additionally, longitudinal and comparative studies are needed to further explore medication experiences and healthcare disparities across different populations and settings.

Keywords: PROMPT-QOL questionnaire, patient education, pharmaceutical therapy, foster therapeutic relationships, quality of life

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INTRODUCTION

Pharmaceutical therapy is the treatment of diseases with drugs other than surgery or radiation therapy. Pharmaceutical services and products play an important role in improving patient's outcome and quality of life[1,2]. While pharmaceutical therapy holds immense potential for improving health outcomes, it also presents challenges and complexities that extend beyond mere efficacy and safety considerations. Understanding the holistic impact of pharmaceutical therapy on patients' lives, encompassing their subjective experiences, perceptions, and overall well-being, is crucial for optimizing healthcare delivery and enhancing patient-centered care. Pharmaceutical therapy may be effective in reducing complications and in improving the quality of life of patients but undesirable effects like irrational drug use, adverse drug reaction or side effects, drug interactions, medication error, fear, inconvenience or medication non-adherence may be caused by pharmaceutical therapy[3,4]. These drug related problems may lead to treatment failure, more illness and increase health expenditure to the patients[5,6]. People understand the need of medicine use for chronic conditions, yet problems can occur during the treatment with medicine use[7]. Some drugs have narrow therapeutic index, they cause toxicity at low doses so it is necessary to administer them at low effective dose. In elder patients, due to ageing process distribution and excretion of drugs is affected because of physiological changes. Liver size decreases with age, so the liver blood flow and excretion of drug is impaired so reduce the dose of narrow therapeutic index drugs and monitor the therapy[8]. Patients having chronic hepatic diseases have poor quality of life. Patients with liver disease suffer from depression and their quality of life is affected[9]. Kidney disorder can be acute and chronic, drug use in this state can be harmful. Kidney patients are affected by comorbid diseases and they are mostly prescribed many medicines. Due to ageing process, some drug interactions occur so risk of adverse drug reaction is more in elderly patients with kidney disease. Compliance problem is common among them[10]. Compliance to the pharmaceutical therapy is also important. According to the literature clinical guidelines and specialists care may lead to the better disease management, but also create burdensome to the patients by prescribing multiple medicines and this increasing use of medicines lead to the problems. Polypharmacy in elderly result in increased cognitive dysfunction that has adverse effects on mood and social functioning. Long term use of these medicines may provide not direct positive feedback in term of efficacy, but adverse effects including difficulties distress or place a burden on patients, so long term use of medicines adversely affects the quality of life[11]. Some patients hold negative views toward medicines, resisting in taking medicine because of dependence or harm but there also exist positive views about it. People have less knowledge of their disease, mode of transmission, diagnosis and treatment. There is need to educate the people and aware them about it to reduce the prevalence rate and complications[12].

Measurement of treatment outcomes from the patient's perspective are termed patient reported outcome measures[5]. In the ever-evolving landscape of healthcare, the pursuit of patient-centered care and the optimization of patient well-being have become paramount[13]. The concept of patient-reported outcome measures (PROs) has gained prominence in contemporary healthcare, emphasizing the importance of incorporating patients' perspectives and voices into clinical decision-making and healthcare delivery. PROs provide a comprehensive assessment of various dimensions of patients' lives, including physical, emotional, social, and functional well-being, thereby offering insights beyond traditional clinical endpoints. Within the realm of pharmaceutical therapy, PROs serve as invaluable tools for assessing the effectiveness, tolerability, and overall impact of medications from the patient's standpoint[14]. A health care provider should understand the drug related needs of the patient. Things that should be considered are safety, effectiveness, indications and ease so that drug related problems can be solved and patient' s quality of life can be improved[15]. Patient reported outcomes are helpful in understsnding the needs of the patient and also for improving their quality of life[16]. There are different instruments for measuring quality of life e.g. quality of life scale (QLS), quality of life interview (QOLI), Wisconsin quality of life index (W-QLI), Quality of life depression scale (QLDS), Quality of life inventory(QOLI), Medical outcome study shortform 36items (SF-36), World health organization quality of life instrument (WHOQOL) etc. These insruments measure quality of life in difeerent ways. Quality of life includes physical, psychological and social aspects[17]. For asessing quality of life and effects of pharmaceutical therapy on patients lives, patient reported outcome measures technique has been used. For pharmaceutical therapy, Hepler and Strand and Cipolle at al conducted a study to improve patient's health related quality of life (HRQoL). Health related quality of life can be measured by using either generic disease specific instruments. Existing tools are not enough to assess the impact of medication therapy[5]. Murawski and Bentley in the US conducted a study on pharmaceutical therapy related quality of life containing 33 items in 2001 but the study has low validity and less understandability to the patients[1]. Renberg and his Swedish team also conducted a study related to patient therapy related quality of life but this study also has low validity because patients had not understood the questions. The two other approaches including short form survey (SF-36) and patient generated index (PGI) were also used to measure health related quality of life (HRQoL). PGI helped health care practitioner to identify, evaluate and resolve health related problems and outcomes of pharmaceutical care provision[1,18]. Responsiveness, precision and relevancy led to the evaluation of pharmaceutical therapy-related quality of life (PTRQoL). PTRQoL will improve our ability to recognize differences in impact on patient's HRQoL that will further allow new meaningful exploration into patient's tolerance and compliance and will permit the practitioner to identify patient's problems with therapy readily and efficiently. PTRQoL fill the gap in outcome measures applicable to pharmaceutical realm. Health-related quality of life (HRQoL), having evolved during the last 20 years or so, as a health outcome is relatively new[19]. Health-related quality of life (HRQoL) plays an important role in patient's life for recognition of impact of disease and treatment on psychological, social and physical functioning. HRQoL is an important step of medication therapy management (MTM) for medication therapy review. Short-form health survey (SF-36) is one of the most widely used HRQoL measures that are not sensitive enough to recognize the pharmacist's interventions or pharmaceutical care (PC) impacts on patient's life. Pharmacists can play their role in improving quality of life of the patients by informing and educating them about medicine effects and side effects[20].

Saudi Arabia has experienced remarkable growth and development in its healthcare sector over the past few decades. This progress is marked by advancements in medical technologies, increased access to healthcare services, and improvements in healthcare infrastructure[21]. However, as the Kingdom continues to evolve, so do the expectations and demands of its citizens when it comes to healthcare. One of the key pillars of healthcare excellence is the emphasis on patient-centered care, a concept that has gained considerable traction in recent years. To achieve this, understanding how patients experience the effects of pharmaceutical therapy on their quality of life is paramount. Given the diverse population and healthcare landscape in Saudi Arabia, it is crucial to tailor healthcare interventions to meet the specific needs and preferences of its citizens. This study aims to delve into the assessment of Patient-Reported Outcome Measures of Pharmaceutical Therapy for Quality of Life (PROPMPT-QOL) in Saudi Arabia, shedding light on the significance of this research, its objectives, and the methodology to be employed.

METHOD

STUDY DESIGN AND DURATION

An observational study was conducted over a period of 10 months, to assess Patient Reported Outcome Measures of Pharmaceutical Therapy for Quality of Life (PROPMPT-QOL) among the Saudi population.

STUDY PARTICIPANTS

Patients with a disease duration of more than 3 months were enrolled in the study. Participants were recruited from various healthcare settings, including clinics, hospitals, community pharmacies, and the community itself. The recruitment process involved identifying potential subjects from hospital medical records and community pharmacy prescription records. These individuals were included in the study based on predefined inclusion and exclusion criteria.

INCLUSION CRITERIA

The study's inclusion criteria encompassed individuals aged 18 years and above, with a disease duration exceeding three months, and currently undergoing medication for more than three months. No restrictions were imposed based on gender, ethnicity, or mental health status. Additionally, participants were required to demonstrate a willingness to provide informed consent, ensuring their voluntary participation in the research.

DATA COLLECTION

Data collection for this study utilized the PROMPT-QOL questionnaire. This questionnaire was developed drawing upon theories related to pharmaceutical therapy-related quality of life (PTRQoL), quality of life (QOL), and health-related quality of life (HRQoL). The questionnaire comprised nine domains with a total of 43 questions, covering various aspects of patients' experiences with pharmaceutical therapy. Within these domains, participants were assessed for the impact of medication on various facets of their lives, including mobility, exertion, pain, sleep, skin, appearance, vision, hearing, speech, digestion, excretion, memory, eating, daily activities, and social interactions. Psychological impacts were evaluated by examining medicine interactions, adverse effects on body organs, medicine resistance, medicine dependence, polypharmacy, changes in medication type or strength, comfort with taking medication in front of others, feelings of boredom regarding regular medication intake, and perceived health status. Questions related to convenience and availability focused on aspects such as appropriate dosage forms, ease of carrying medication, medication availability, medication-related expenses, medication quality, service process, and waiting times. To gauge overall quality of life, participants were asked about their satisfaction with medication use, overall happiness, and perceived improvements in their daily lives.

TRANSLATION AND VALIDITY

For participants who primarily spoke Arabic, the English version of the PROMPT-QOL questionnaire (9 items) was translated into Arabic, the national language of Saudi Arabia, by a qualified linguist. Subsequently, the translated version was back-translated into English to ensure content accuracy and concordance in meaning between the two versions. Content validity was assessed, and construct validity was established through factor analysis.

DATA ANALYSIS

Data analysis was conducted using GraphPad Prism 5 and IBM SPSS Statistics (version 21). Descriptive statistics, including frequency distributions for categorical variables, were generated. The mean score was also computed. Reliability of the questionnaire was assessed using Cronbach's alpha, which indicates the degree to which items within a set are closely related. This analysis was performed using the reliability command in SPSS. All data were analyzed to address the research objectives and hypotheses outlined in this study.

RESULTS

Table 1 presents the basic demographic data of the study participants. The majority of participants were between the ages of 18-27 (43.0%), with smaller proportions in the older age groups. Female participants comprised 74.4% of the sample, and the majority resided in urban areas (87.8%). Regarding education, most participants had completed university education (76.7%), followed by tertiary education (16.7%) and secondary education (3.5%). The largest proportion of participants were unemployed (42.7%) or employed in government positions (40.2%). Approximately 58.2% of participants lived with their families, and a similar percentage reported a monthly income of less than 10000. A significant portion of the participants reported suffering from chronic diseases (42.3%) and were currently on medications (55.6%). The majority were taking between 1-3 medications (75.1%), with smaller percentages taking 4-6 or more than 6 medications. When asked about their preference for health care consultation, most participants preferred consulting physicians (74.9%) over pharmacists or self-medication. In terms of sources of medicine-related information, physicians were the primary source (54.4%), followed by pharmacists and the internet. Regarding forms of medicine, the majority used Western medicine exclusively (47.2%), while a smaller percentage used both Western and alternative forms such as yoga (30.8%).

Table 1: Patient's Basic Demographic Data

Characteristics	Frequency	Percentage
Age		
18-27	247	43.0
28-37	116	20.2
38-47	121	21.1
>47	90	15.7
Gender		
Male	147	25.6
Female	427	74.4
Locality		
Urban	504	87.8
Rural	70	12.2
Education		
Illiterate	7	1.2
Primary	11	1.9
Secondary	20	3.5
Tertiary	96	16.7
University	440	76.7
Occupation		
Unemployed	245	42.7
Government	231	40.2
Private	72	12.5
Retired	26	4.5
Living status		
Alone	240	41.8
With family	334	58.2
Monthly income		
<10000	334	58.2
10001-30000	103	17.9
30001-50000	30	5.2
>50000	107	18.6
Are you suffering from chronic disease?		
Yes	243	42.3
No	331	57.7
Are you on medications?		
Yes	319	55.6
No	255	44.4
Number of medications		
1-3	431	75.1
4-6	114	19.9
>6	29	5.1
Your preference towards health care consultation		
Physician	430	74.9
Pharmacist	129	22.5
Self-medication	9	1.6
Traditional practitioner	6	1.0
Sources of medicine related information		
Physician	312	54.4
Pharmacist	165	28.7
Printed material	9	1.6
Internet	88	15.3
Forms of Medicine		
Western	118	47.2
Yoga	5	2.0
Both	77	30.8

Table 2 provides information related to medicine use among chronic disease patients, presenting the frequency and percentages of each domain/item along with the mean score. In the domain of "General attitude toward medication use" (D1), a moderate level of attitude was observed, with 36.2% of participants reporting a moderate level of attitude towards medication use. Similarly, in the domain of "Medicine information and disease information" (D2), participants showed moderate levels of understanding, with mean scores ranging from 2.21 to 2.87. Notably, participants reported higher mean scores for items related to "How to use medicines" and "Reasons for using medicines regularly." Regarding "Medicine effectiveness" (D3), participants generally perceived medicines as effective, with mean scores ranging from 2.28 to 2.42. In the domain of "Impacts of medicine and side effects" (D4), participants reported experiencing various impacts and side effects, with mean scores ranging from 0.94 to 1.61. Psychological impacts of medicine use (D5) were also notable, with participants reporting adverse effects on body organs and changes in medicine type or strength. Mean scores for these items ranged from 1.14 to 1.27. Convenience (D6) and availability/accessibility (D7) of medicines were generally perceived positively, with mean scores ranging from 1.50 to 2.57. In terms of "Therapeutic relationships with healthcare providers" (D8), participants generally trusted their doctors' decisions and found healthcare providers willing to answer their queries. Mean scores for these items ranged from 2.51 to 2.64. Finally, in the domain of "Overall quality of life" (D9), participants reported moderate levels of satisfaction, happiness, and improvement in daily life, with mean scores ranging from 2.30 to 2.59.

The analysis revealed notable trends in PROPMPT-QOL. Among the highest scores observed, the domain of Medicine Information and Disease Information garnered significant attention, with the Reasons for Using Medicines Regularly scoring the highest at 2.87, followed closely by How to Use Medicines at 2.77 and Indication at 2.60. These results underscore the importance of clear and comprehensive information provision in pharmaceutical therapy, indicating that patients place considerable value on understanding the purpose and proper administration of their medications. Conversely, the lowest scores were observed in the domain of Impacts of Medicine and Side Effects, particularly in categories related to intimate aspects of life. Sexual Desire or Relationship scored the lowest at 0.94, while Vision, Hearing, or Speech and Daily Activities or Socializing with Others scored marginally higher at 1.08 and 1.10, respectively. These findings suggest that medications may have a significant impact on various aspects of patients' lives, particularly in areas related to personal relationships and daily functioning. These findings suggest that chronic disease patients generally have positive attitudes towards medication use and perceive medications as effective. However, they also experience various side effects and impacts, highlighting the importance of considering holistic approaches to patient care. Additionally, the convenience, availability, and therapeutic relationships with healthcare providers play significant roles in patients' medication experiences and overall quality of life.

Table 2: Information Related to Medicine use among Chronic Disease Patients Frequency and percentages of each domain/item

Domain/item	Medicine Use Information N (%)					Mean Score
	Nothing 0	**Little 1**	**Moderate 2**	**Much 3**	**Very much 4**	
D1. General attitude toward medication use	42(7.3)	82(14.3)	208(36.2)	121(21.1)	121(21.1)	2.34
D2. Medicine information and disease information						
Medicine name	42(7.3)	121(21.1)	160(27.9)	129(22.5)	122(21.)	2.29
Strength	40(7.0)	70(12.2)	117(20.4)	178(31.0)	169(29.4)	2.64
Indication	44(7.7)	75(13.1)	112(19.5)	178(31.0)	165(28.7)	2.60
How to use medicines	42(7.3)	45(7.8)	105(18.3)	195(34.0)	187(32.6)	2.77
Reasons for using medicines regularly	33(5.7)	42(7.3)	97(16.9)	197(34.3)	205(35.7)	2.87
What to do if missed medicine doses	83(14.5)	89(15.5)	157(27.4)	113(19.7)	132(23.0)	2.21
Side effects and management	59(10.3)	123(21.4)	149(26.0)	109(19.0)	134(23.3)	2.24
Causes and prevention	78(13.6)	81(14.1)	152(26.5)	128(22.3)	135(23.5)	2.28
Symptoms, severity and treatment	86(15.0)	74(12.9)	141(24.6)	140(24.4)	133(23.2)	2.28
D3. Medicine effectiveness						
Symptoms relief	57(9.9)	73(12.7)	153(26.7)	153(26.7)	138(24.0)	2.42
Cure of disease	75(13.1)	77(13.4)	138(24.0)	149(26.0)	135(23.5)	2.33
Onset of medicine action	70(12.2)	98(17.1)	142(24.7)	130(22.6)	134(23.3)	2.28
D4. Impacts of medicine and side effects						
Mobility, exertion or pain	171(29.8)	95(16.6)	156(27.2)	93(16.2)	59(10.3)	1.61
Sleep	209(36.4)	103(17.9)	145(25.3)	72(12.5)	45(7.8)	1.37
Memory or thinking process	252(43.9)	97(16.9)	123(21.4)	68(11.8)	34(5.9)	1.19
Appearance or body skin	233(40.6)	96(16.7)	134(23.3)	73(12.7)	38(6.6)	1.28
Eating, digestion or stool passing	207(36.1)	95(16.6)	165(28.7)	63(11.0)	44(7.7)	1.38
Vision, hearing or speech	285(49.7)	82(14.3)	119(20.7)	52(9.1)	36(6.3)	1.08
Sexual desire or relationship	319(55.6)	73(12.7)	107(18.6)	48(8.4)	27(4.7)	0.94
Daily activities or socializing with others	274(47.7)	91(15.9)	125(21.8)	48(8.4)	36(6.3)	1.10
D5. Psychological impacts of medicine use						
Adverse effects on body organs	270(47.0)	77(13.4)	130(22.6)	54(9.4)	43(7.5)	1.17
Taking medicines on daily basis	249(43.4)	77(13.4)	145(25.3)	60(10.5)	43(7.5)	1.25
Medicine resistance or reduced efficacy	250(43.6)	95(16.6)	133(23.2)	61(10.6)	35(6.1)	1.19
Medicine dependence	240(41.8)	93(16.2)	135(23.5)	65(11.3)	41(7.1)	1.22
Change in medicine type or strength	232(40.4)	114(19.9)	136(23.7)	55(9.6)	37(6.4)	1.26
Taking many medicines	232(40.4)	99(17.2)	138(2.0)	64(11.1)	41(7.1)	1.27
Having medicines in front of others	260(45.3)	92(16.0)	134(23.3)	56(9.8)	32(5.6)	1.14

Medicine interaction	259(45.1)	81(14.1)	140(24.4)	62(10.8)	32(5.6)	1.18
Feeling ill or bad health unlike others	267(46.5)	80(13.9)	140(24.4)	47(8.2)	40(7.0)	1.15
D6. Convenience						
Appropriate dosage form	197(34.3)	93(16.2)	151(26.3)	66(11.5)	67(11.7)	1.50
Convenience of use	110(19.2)	100(17.4)	130(22.6)	117(20.4)	117(20.4)	2.05
Ease of bringing medicines around	74(12.9)	61(10.6)	135(23.5)	122(21.3)	182(31.7)	2.48
D7. Availability and accessibility						
Medicine availability in a setting	71(12.4)	56(9.8)	121(21.1)	135(23.5)	191(33.3)	2.56
Medication and travel expenses	118(20.6)	111(19.3)	142(24.7)	94(16.4)	109(19.0)	1.94
Service process and waiting time	58(10.1)	64(11.1)	135(23.5)	126(22.0)	191(33.3)	2.57
Travel or self-support to hospital	93(16.2)	124(21.6)	148(25.8)	93(16.2)	116(20.2)	2.03
D8. Therapeutic relationships with healthcare providers						
Trust doctor's decision on medicine treatment	47(8.2)	59(10.3)	129(22.5)	158(27.5)	181(31.5)	2.64
Friendly manners and willingness to answer medicine queries	55(9.6)	56(9.8)	143(24.9)	141(24.6)	179(31.2)	2.58
Getting help to sort out medicines related problems or concerns	59(10.3)	6(10.5)	160(27.9)	118(20.6)	177(30.8)	2.51
D9. Overall quality of life						
Satisfaction with medication use	52(9.1)	60(10.5)	158(27.5)	129(22.5)	175(30.5)	2.55
Happiness	47(8.2)	63(11.04)	151(26.3)	131(22.8)	182(31.7)	2.59
Improvement in daily life	85(14.8)	74(12.9)	147(25.6)	117(20.4)	151(26.3)	2.30

DISCUSSION

This study on PROPMPT-QOL among the Saudi population provides significant insights into how patients perceive and engage with their medication regimens, particularly in terms of information provision and the impact on various aspects of life. The findings indicate a strong preference among participants, primarily young, educated females, for obtaining medication-related information from physicians, underscoring the crucial role healthcare providers play in patient education and support. Studies have shown that people who consulted physicians and traditional practitioner have good quality of life[22]. Patients commonly obtain information from various sources, with the internet and printed material being predominant, leading to improvements. The internet offers extensive information accessibility, including medicine-related details[23]. Patients interact with existing material and healthcare providers, enhancing their understanding of diseases and medications; however, ensuring the validity of information is paramount[24].

The results of this study highlight several important aspects of medication use among chronic disease patients in Saudi Arabia. Across the domains assessed, participants generally exhibited positive attitudes towards medication use and perceived medications as effective. However, they also reported experiencing various side effects and impacts, underscoring the complex nature of pharmaceutical therapy. Comparing these findings with previous studies provides valuable insights into the consistency and variability of medication experiences across different populations and healthcare systems. For instance, a study by Krijnen et al. (2005) on patients with hypertension and renal artery stenosis found similar trends in medication effectiveness, with participants reporting positive outcomes in symptom relief and disease cure[2]. This consistency suggests that perceptions of medication efficacy may be relatively stable across different disease conditions. However, differences may arise in the prevalence and severity of medication side effects and impacts. For example, a study by Neame and Hammond (2005) on patients with rheumatoid arthritis found a higher prevalence of adverse effects on body organs and changes in medicine type or strength compared to the current study[7]. This disparity could be attributed to differences in the types of chronic diseases studied and the pharmacological interventions employed. Moreover, variations in healthcare systems and cultural contexts may influence patients' perceptions and experiences of medication use. A study by Sakthong et al. examined medication therapy-related quality of life among Thai patients and found differences in medication convenience and availability compared to the current study in Saudi Arabia[25,26]. These differences underscore the importance of considering cultural and contextual factors in designing patient-centered healthcare interventions.

The high scores in the domains of Medicine Information and Disease Information, particularly regarding the reasons for using medicines regularly, how to use them, and their indications, highlight the importance patients place on understanding their treatments. This emphasis on clear and comprehensive medication and disease information aligns with previous studies which have demonstrated that well-informed patients are more likely to adhere to their medication regimens, thereby improving treatment outcomes[27,28]. The positive correlation between quality information provision and patient adherence suggests that enhancing patient education could be a key strategy in optimizing pharmaceutical therapy outcomes[29]. Conversely, the lower scores in the domains related to the impacts of medication and side effects, especially concerning intimate aspects of life such as sexual desire or relationships, vision, hearing, speech, and social activities, point to significant areas for improvement in patient care. These findings resonate with studies who reported that side effects and impacts on daily living are among the most common reasons for non-adherence to medication[30,31]. The results thus underscore the need for healthcare providers to address these concerns proactively, ensuring that patients are fully aware of potential side effects and equipped with strategies to manage them. The study's revelations about the negative impacts of medication on personal and social aspects of patients' lives also call for a more holistic approach to patient care, one that goes beyond treating the disease to encompass the overall well-being of the patient.

The findings of this study have several implications for healthcare practice in Saudi Arabia. Firstly, healthcare providers should prioritize patient education and counseling to address medication-related concerns and promote adherence. This may involve providing clear and comprehensive information about medication use, side effects, and management strategies. Secondly, efforts should be made to improve the convenience and accessibility of medications, particularly in rural areas where access to healthcare services may be limited. This could involve enhancing medication distribution systems, reducing medication costs, and expanding telehealth services for remote consultations. Furthermore, fostering therapeutic relationships between patients and healthcare providers is essential for promoting trust, communication, and shared decision-making. Healthcare professionals should strive to engage patients in their care by addressing their concerns, respecting their preferences, and involving them in treatment decisions. In terms of future research, longitudinal studies are needed to explore the long-term effects of medication use on patients' quality of life and clinical outcomes. Additionally, comparative studies across different populations and healthcare settings can provide valuable insights into the factors influencing medication experiences and healthcare disparities.

Several limitations need to be acknowledged in this study. Firstly, the cross-sectional design prevents establishing causal relationships between medication experiences and quality of life outcomes over time. Secondly, reliance on self-reported data may introduce recall and social desirability biases. Additionally, the study's sample, recruited primarily from healthcare settings, may not fully represent all chronic disease patients in Saudi Arabia. Language and literacy barriers may have excluded individuals with limited proficiency in English or Arabic, impacting the generalizability of findings. Furthermore, the PROMPT-QOL questionnaire's domains may not encompass all relevant aspects of pharmaceutical therapy-related quality of life. Finally, the response rate and potential selection bias were not reported, further limiting the study's external validity.

CONCLUSION

In conclusion, this study contributes significantly to our understanding of patient-reported outcomes in pharmaceutical therapy, emphasizing the critical importance of effective information provision and the need to address the holistic impacts of medications on patients' lives. By focusing on these areas, healthcare providers can enhance patient adherence, satisfaction, and overall quality of life, ultimately improving treatment outcomes for individuals with chronic conditions.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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