



Enhancing Patient Knowledge and Attitudes through Health Education Services at King Saud University Medical City

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Abstract

Background: The study aimed to evaluate the attitudes and perceptions of health educators and identify challenges they face when providing services to patients at the Medical City Center, King Khalid Hospital, King Saud University, Riyadh, Saudi Arabia. It also sought to assess patient satisfaction with health education services and identify areas for improvement. **Methods:** A cross-sectional descriptive survey was conducted among patients and health educators. The questionnaire included nine items on attitudes and perceptions and seven items on challenges faced by health educators. Demographic data such as age, gender, nationality, and educational level were also collected. Data analysis focused on determining the influence of demographic variables on attitudes, perceptions, and challenges. **Results:** Respondents' ages ranged from 15 to over 41 years, with 40.2% aged above 41. Male patients constituted 61.2% of the sample, while 83.6% had a university-level education. Saudi nationals made up 91.1% of respondents. Most patients (81.8%) reported receiving health education services during visits, and 67% found the methods suitable for their treatment. However, 42% were unaware of the national care plan, and 64.3% expressed a desire for improvements in the health education program. Patient feedback highlighted deficiencies in health educators' preparedness, workload management, and communication skills, with 75.4% indicating gaps in knowledge during interactions. Educational level significantly impacted health educators' attitudes and perceptions, while other demographic factors did not. **Conclusion:** The study highlights high patient satisfaction with health education services but also identifies critical areas for improvement, including health educators' knowledge, workload organization, and program enhancement. Addressing these gaps can improve the quality and effectiveness of health education services at the Medical City Center.

Keywords: Health education, patient satisfaction, health educators, Riyadh, challenges, attitudes, perceptions, quality improvement.

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Introduction

Various chronic diseases, including diabetes mellitus [18; 21-22], hypertension [26], asthma [30; 32], obesity [2; 25],

and cardiovascular heart disease [8], are effectively managed through health education. Moreover, it provides individuals with a sense of reassurance and knowledge about their health and that of their loved ones, while also

fostering beneficial health behaviors for the wider public [6]. Health literacy, distinct from conventional literacy, has gained significant importance in social, economic, and health development over the last two decades. A community's initiatives to enhance healthcare services and prevent illnesses can be greatly aided by improvements in health literacy [19]. Individuals need a set of skills known as health literacy to navigate the healthcare system efficiently. These skills encompass functional, interactive, numeracy, and critical abilities, involving tasks such as understanding written text, interpreting information, communicating health-related information, navigating the healthcare system, and using numerical data [9].

Inadequate health literacy significantly hampers care for individuals with chronic conditions like hypertension or diabetes [33]. Research indicates that patients who possess a better understanding of their illness and treatment tend to be more successful in managing it. Health education, as a means of providing patients with comprehensive information about their health and necessary care, has been shown to enhance patient satisfaction [25; 32]. Effective health education depends on appropriate content, delivery methods, relevance to primary healthcare, and accurate program monitoring and evaluation [13]. Insufficient health literacy can impede self-care and engagement in health promotion, potentially contributing to inadequate disease management. Patient satisfaction with medical care is a vital measure of healthcare quality [20], influencing healthcare outcomes and service utilization [11]. Health education studies in Saudi Arabia have primarily focused on specific populations like diabetics, hypertensives, and obese individuals [4-5]. Understanding the public's knowledge about health educators and their attitudes toward this crucial aspect of healthcare is an essential initial step in developing an effective health education strategy.

Methods

The current study was based on cross-sectional surveyed types to determine and examine the degree of health educator's role in primary health care centers, as well as to identify the sources of health education among the public and to assess participants' knowledge and attitudes visiting the King Khalid Hospital, medical city, King Saud University, Riyadh, Saudi Arabia. The current study considered 400 (males and females) participants (patients) who visit primary healthcare centers for different illnesses. Participants who declined to participate, as well as those with significant cognitive impairment or communication difficulties, were eliminated from the research and data analysis.

The information was gathered via a self-administered questionnaire with 21 items (questions) separated into different categories. Four questions on demographic characteristics (age, sex, education, nationality) were included in section I. Section II have questions about

health and health education topic. Section III included different questions; respondents were asked how much different sources of health education had contributed to their health education. The questionnaire should be validated using the Cronbach alpha with a value greater than 0.7-0.9. Finally, Section IV contained patients' remarks about attitudes and their perceptions about various components of health education. The response about health and health education will be in the "yes" or "no" type. Questions regarding respondents' knowledge, attitude, and perceptions about health educators as well as sources of information, will be graded on a 5-point Likert scale ranging from "Strongly agree" to "strongly disagree."

Significant Study

Health education specialist is more important to maintaining the environment of the hospital organization, their structural change, physician-patient relation, behavior change, and best possible practices present in the hospital for the improvement of their health. The study also highlighted the effects of having professionals to encourage people to be mindful of how to maintain and restore their health, improve literacy about the health educator staff present in the hospital provide good skills, and maintain good health, values, and the importance of the hygiene conditions. Furthermore, the study also highlights about the health care workers to acknowledge the function of health educators, towards the community get feedback from the patients, and ultimately improve the health status of individuals, families, communities, states, and ultimately mankind. Health education is essential for enhancing the condition of the overall health of different communities and people. It will also help in improving the health of the whole nation.

Data Analysis

Categorical variables were analyzed using percentage (%), and frequencies, however, the continuous variables were analyzed as mean value (mean, SD $\pm$ SE) or median values using interquartile range (IQ). Analysis of variance (ANOVA) analysis was used for comparison study. Logistic regression analysis was used to carry out the effect of covariance on the attitude and perception variables. The Statistical Package for Social Sciences (SPSS) was used to analyze and display the data for this study.

Results

The study aimed to assess patients' perspectives on health educators at Medical City, King Khaled Hospital, King Saud University in Riyadh, Saudi Arabia. 281 out of 400 patient responses were analyzed to determine attitudes toward health educators and the challenges they face. The demographic characteristics i.e., gender, age of respondents, education level, and nationality are presented in Figure 1. The analysis focused on gender distribution and age groups among patients. Results indicated a majority of male respondents (61.2%) and

various age ranges represented, with the majority being over 41 years old (40.2%). The study highlighted the variability in responses and challenges faced by health educators, aiming to improve health education methods (Figure 1).

Table 1 exhibits the descriptive statistics related to the demographic characteristics, attitudes, and perceptions of patients concerning health educators. Additionally, Table 2 displays the descriptive statistics illustrating the challenges encountered by health educators while working at the medical city center. These tables contain data such as mean, standard deviation, maximum, and minimum values. Out of the 400 patients surveyed, 281 responses were analyzed, while incomplete survey responses were excluded from the analysis. Moreover, Table 1 specifically showcases the descriptive statistics pertaining to gender (male and female). The study aimed to assess how nationality, age range, educational background, and education level impact the attitudes, perceptions, and challenges experienced by health educators during their working hours at the medical city center. Insignificant findings were observed regarding the influence of nationality on attitude ($p=0.254$) and challenges faced ($p=0.067$). Similarly, gender did not show significance in relation to attitude and perception, but it did reveal significance in terms of the challenges encountered by health educators. Similarly, a significant level was noted concerning education and attitudes and perceptions toward health educators ($P=0.004$). Conversely, insignificant differences were observed regarding the challenges faced by health educators. However, the results indicated insignificant differences at a 5% probability level with P-values of 0.421 for attitude, 0.226 for perception, and challenges faced by health educators in the Medical City center (Table 3).

Table 1. Descriptive statistics of the demographic, attitude, and perception of health educators toward patients

Table 2. Descriptive statistics of challenges faced health educators faced during the working hours in the medical city

	N		Mean	SD	Range
	Valid	Missing			
Gender	281	0	1	0	1
Age	281	0	4.5	1.5	5
Education	281	0	3.83	0.37	1
Nationality	281	0	1.1	0.3	1
Q1	281	0	1.64	0.77	2
Q2	281	0	2.3	1.1	4
Q3	281	0	2.19	1.05	4
Q4	281	0	2.12	0.98	4
Q5	281	0	2.07	0.93	4
Q6	281	0	2.18	1.12	4

Q7	281	0	2.299	1.057	4
Q8	281	0	2.15	1.005	4
Q9	281	0	2.13	0.983	4
Q10	281	0	2.38	1.018	4
Q11	281	0	2.04	0.947	4
Q12	281	0	2.32	1.074	4
Q13	281	0	1.98	0.96	4
Q14	281	0	2.17	0.95	4
Q15	281	0	2.04	0.956	4
Q16	281	0	1.99	0.902	4
Q17	281	0	1.83	0.858	4

Table 3. Attitude, perception, and challenged variables affected by Age, and education.

Variables	Test	Sig
Age		
The distribution of attitude is the same across categories of Age.	Kruskal-Wallis	0.703
The distribution of challenges is the same across categories of Age.	Kruskal-Wallis	0.373
Education		
The distribution of attitude is the same across categories of education	Mann-Whitney U test	0.04**
The distribution of challenges is the same across categories of education	Mann-Whitney U test	0.099

Table 4. Overall significance levels of attitude and perception and challenges faced by health educators in the Medical Center

Variables	t-test for Equality of Means (Significant 2-tailed)	F value	Sig
Attitude and perception	(0.326; 0.327)	0.650	0.42
Challenge	(0.032; 0.035)	1.471	0.22

The study assessed patients' perceptions and experiences regarding health educator services at Medical City, King Khaled Hospital, Riyadh. Various aspects were scrutinized through different questions, including satisfaction with services received, adequacy of time spent with educators, the relevance of education topics, and educators' professionalism. The percentage response to each question was summarized (Table 5). Regarding receiving health educator services, 53.7% responded affirmatively, while 28.1% said "No," and 18.1% were somewhat neutral. Responses on the sufficiency of time spent with educators varied: 27.8% agreed, 28.1% strongly agreed, 33.5% were

neutral, and 5.3% disagreed. Notably, 32% and 30.6% agreed and strongly agreed, respectively, that educators were courteous in answering health-related queries. Regarding education methods, 32.7% agreed, and 30.6% strongly agreed that methods suited them, while 29.2% were neutral. Additionally, 67% found education topics relevant to their health problems.

As for session length, 38.1% agreed, 19.6% strongly agreed, and 31.3% were neutral. However, 8.2% disagreed, suggesting the need for longer sessions, possibly due to a desire for more interaction during sessions. Regarding waiting time for education, 51.3% found it acceptable, while 38.8% remained neutral. Meanwhile, 33.8% agreed and 24.9% strongly agreed that educators' attitudes toward health issues were positive. Regarding satisfaction with education, 32.4% agreed it was excellent, 30.2% strongly

agreed, while 5.7% were dissatisfied. Moreover, 48% felt educators adhered to standard care plans. However, 36.3% suggested the health education program needed improvement, and 32.4% agreed there was inadequate preparation among educators. Additionally, 39.1% felt educators struggled with workload management. Patients acknowledged the importance of training programs for educators: 36.7% agreed and 27.4% strongly agreed. Yet, 32% remained neutral, and 2.5% disagreed with the necessity of more training. Furthermore, 37% agreed that evaluating educators for improvement was necessary, while 43.4% identified a lack of communication skills among educators. Overall, patients expressed the need for improved training, better-equipped staff, enhanced education programs, and more effective communication skills among health educators for better patient care and hospital management.

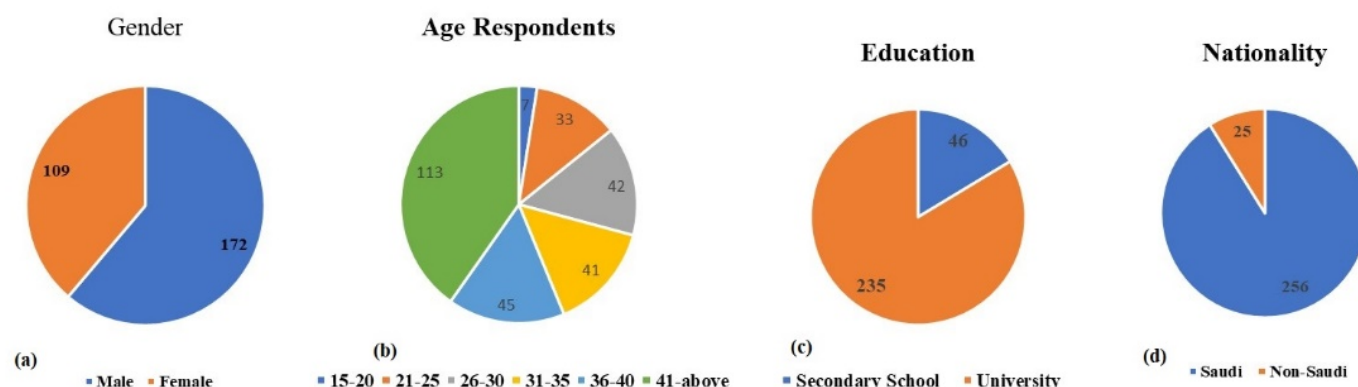


Figure 1. Socio-demographic characteristics

Table 5. Attitude, perception, and challenges assessment.

		Agree	Strongly Agree	Neutral	Disagree	Strongly Disagree
Q1	Did you receive health educator-related services during your visits to Medical City?	Yes 151 (53.7%)	No 79 (28.1%)	To some extent 51 (18.1%)		
Q2	The time I spend with a health educator is sufficient	78 (27.8%)	79 (28.1%)	94 (33.5%)	15 (5.3%)	15 (5.3%)
Q3	The Health Educator staff in Medical City was courteous in answering my Health-related questions	90 (32%)	78 (27.8%)	89 (31.7%)	15 (5.3%)	9 (3.2%)
Q4	The methods used in health education suit me	92 (32.7%)	86 (30.6%)	82 (29.2%)	18 (6.4%)	3 (1.1%)
Q5	Topics presented in health education sessions are relevant to my health problems	90 (32%)	100 (35.6%)	73 (26%)	16 (5.7%)	2 (0.7%)
Q6	The length of health education sessions is adequate	107 (38.1%)	55 (19.6%)	88 (31.3%)	23 (8.2%)	8 (2.8%)
Q7	Waiting time utilized for health education is acceptable	87 (31%)	57 (20.3%)	109 (38.8%)	22 (7.8%)	6 (2.1%)
Q8	The attitude of health educators toward health problems is positive	95 (33.8%)	70 (24.9%)	98 (34.9%)	13 (4.6%)	5 (1.8%)
Q9	The satisfaction level with health education delivered at Medical City is excellent	91 (32.4%)	85 (30.2%)	85 (30.2%)	16 (5.7%)	4 (1.4%)

Q10	The Health Educators are using a standard Health Education Care Plan for every patient	71 (25.3%)	65 (23.1%)	118 (42%)	20 (7.1%)	7 (2.5%)
Q11	The program in college Health Education needs to be improved	102 (36.3%)	79 (28.1%)	85 (30.2%)	14 (5%)	1 (0.4%)
Q12	Inadequate preparation for working in the field of health education	91 (32.4%)	43 (15.3%)	119 (42.3%)	22 (7.8%)	6 (2.1%)
Q12	The workload that the immediate supervisor did not systematically arrange	110 (39.1%)	83 (29.5%)	74 (26.3%)	10 (3.6%)	4 (1.4%)
Q13	Need More Training Programs on Health Education	103 (36.7%)	77 (27.4%)	90 (32%)	7 (2.5%)	4 (1.4%)
Q14	Evaluation of health educators to find room for improvement is necessary	104 (37%)	84 (29.9%)	86 (30.6%)	5 (1.8%)	2 (0.7%)
Q15	Lack of skills in communication to be able to create rapport with patients	122 (43.4%)	90 (32%)	63 (22.4%)	5 (1.8%)	1 (0.4%)
Q16	Need more training programs on health education	103 (36.7%)	77 (27.4%)	90 (32%)	7 (2.5%)	4 (1.4%)

Discussion

The current study was designed to determine the attitude and perception of the patients towards health educators receiving at medical city, King Khaled hospital, King Saud University, Riyadh Saudi Arabia. For that purpose, the 281 patients' responses were analysed to determine the role of health educators in different aspects. The findings of this study show that, even for patients with chronic conditions, the public does not receive the level of health education that is expected in basic healthcare facilities. The data regarding "did you receive health educator related services during your visits to Medical City" was evaluated with Yes, No and to some extent. The results recorded 151 (53.7%), 79 (28.1%) and to some extent 51 (18.1%) respondents were said that the health educator related service during visit to Medical City were neither good, neither negative. The similar results were reported by researchers have emphasized the need for health professionals to be more proactive in terms of their own risk behaviors and raise their own understanding of why people choose health behaviors [14]. Similarly, the second question "the time I spend with health educator is sufficient" 78 (27.8%) were agree, 79 (28.1%) were believed strongly agree, 94 (33.5%) were not given any answer (neutral), 15 (5.3%) disagree and strongly disagree were believed that the time spend by health educators is not sufficient respectively. Health worker interaction more important and need to spend more time with patients to enhance health care results [27-28]. There needs to be a strong, sincere engagement between patients' health workers and doctors if individual members of our society are to benefit from physician health education. Self-efficacy has improved because of interventions to enhance self-care [31]. Overall, the more respondents were agreeing with this statement the health educators' staff in medical city courteous in answering the health-related questions in the center. Time is essential to any educational process. Our scientifically proven health prevention strategies of exercise and diet are dependent on

the improvement of patient health literacy. Patients need to fully comprehend how healthy interventions can affect their short- and long-term health. The fiduciary connection between a patient and a doctor should be built on the consent procedure. Physicians must understand that making an informed medical decision is a process of education and has the ability to change the patient-physician relationship for the betterment of both parties [29]. As a result, we can infer that, more respondents stated that the methods used by health education suit the patients the way they are treated in the medical city center. Overall, 67% respondents agreed that the topic presented in health education session are relevant to my health problems, however, only 6% believed opposite these statements. The similar results were suggested by researcher suggested that there were three areas of health—healthcare, disease prevention, and health promotion—are sometimes replaced by "being unwell, being at risk, and remaining healthy" to accommodate an individual approach. There is a need to explain the whole scenario to patients under cool and calm conditions to improve their health.

However, the question response the length of the session is adequate were recorded by the patients, however, minor patients (11%) reported that the session length should be more. There are many factors concerning these issues, maybe patients need to talk more with people who give him peaceful talk during the session. The importance of health education in modifying health seeking behavior and the improper use of health services [12] has also been demonstrated by studies carried out in Saudi Arabia [18].

The question is important to give importance for personality development by health education and learn by workshop and other health education resources. 51.3% of patients agreed that waiting time utilized for health education is acceptable. Overall, the current question, about 69% agreed about the attitude of the health

educators towards health problems are positive, however, 6% patients were disagreeing about the attitude towards health problems. Similar results were reported by researchers suggested that consequently, there is a critical need for the efficient implementation of programs for health education in primary healthcare facilities, especially for people with long-term illnesses [10]. Self-management is one tool that has been found to be useful in promoting behavior change [7]. Self-management is a method for altering health behaviors that focuses on the patient's viewpoint and enables people to improve their own state of health by making progress toward personal health objectives [15].

The results suggested that 91 (32.4%) patients agreed that knowledge about the health education at medical city is excellent of the staff. Similarly, 85 (30.2%) patients strongly agreed, similar numbers were neutral about this question. There is more important that the health educators have tremendous knowledge to manage the patients in medical city health care center [21]. Public awareness would increase, and more individuals would use health care services because of better health education of the populace through such channels as health care settings and the media greater suitability [1; 3]. Due to a lack of information and health education, previous research in Saudi Arabia found that many patients misuse medical resources such PHC centers and emergency rooms [3].

Overall, 48% patients were happy about the plan used in medical city for standard health education care plan used by health educators. There is a dire need to educate the patients who visit the medical city, know about the standard health education plan, because 42 % of patients don't know about this. Overall, results suggested that 64.3% of patients want the program in college health education to be improved. Overall, 48% of patients suggested that health educators were inadequate preparation for working in the field of health education, however, 10% patients believed they have adequate preparation in education in the field of health education. As a result, health education ought to be given top priority in medical facilities, particularly in light of the rising cost of healthcare [3]. Similarly, it was also suggested that it's crucial for health educators like health worker aid to balance the conflict between individuals' personal lifestyle preferences and their knowledge of health risk behaviors [17].

The current study results suggested that about 110 (39.1%) patients responded that the health educators didn't manage the workload systematically during the duty hours suggested by the immediate supervisor in the hospital. Similarly, 83 (29.5%) also strongly agree with this statement. Overall. The immediate supervisor did not systematically arrange 68% of patients' workload. The data regarding "Need more training programs on health education" suggested that 103 (36.7%) patients agree with this type of session for assessment and quality improvement programs in the hospital. Similarly, 77

(27.4%) patients strongly agree with this initiative. Similar results were reported by Johnson et al., 2022 [16] suggested that health workers are supposed to be change patients' behavior who help reduce the overall burden of disease in the communities they serve. However, they exhibit risky behaviors that make them more susceptible to non-communicable diseases, thus they need to be given the tools to make better decisions regarding their health. Furthermore, they also suggested that their function in communities is directly impacted by the issues addressed by the health workers. Policymakers and executives who design training programs urgently need to take deliberate, strategic action to address their health issues and to think about using a self-management intervention paradigm to improve their overall health status [16]. Another also suggested that health professionals play a significant role as a barrier between communities and the health system by drawing on their personal experiences [23].

The results suggested that about 104 (37%) of the patients agreed with the question for health educators, 84 (29.9%) strongly agreed. Overall, the maximum number of patients stated that 75.4% agreed that health educators have less knowledge during communication while patients visiting the medical city center In Riyadh. Overall, 64 of the patients thought the health educators need more training programs on health education for the improvement of quality and management of the patients in the hospital. Johnson et al., 2022 [16] suggested that health workers are supposed to change patients' behavior who help reduce the overall burden of disease in the communities they serve. However, they exhibit risky behaviors that make them more susceptible to non-communicable diseases, thus they need to be given the tools to make better decisions regarding their health. Furthermore, they also suggested that their function in communities is directly impacted by the issues addressed by the health workers. Policymakers and executives who design training programs urgently need to take deliberate, strategic action to address their health issues and to think about using a self-management intervention paradigm to improve their overall health status [16]. Another also suggested that health professionals play a significant role as a barrier between communities and the health system by drawing on their personal experiences [24].

Conclusion

The study investigated patients' attitudes and perceptions towards health educators within a medical care center, revealing an overall positive sentiment among patients in the medical city. However, it also identified areas necessitating improvement, highlighting the importance of educators dedicating more time to effectively engage patients and extensively communicate about their healthcare concerns during visits to the medical center. Challenges encountered by health educators were pinpointed, encompassing issues pertaining to organization, preparation, workload, training opportunities, and the need for space for professional

advancement. While communication skills were acknowledged as a strength, the study underscored the crucial role of effective communication and conflict resolution in managing the medical center efficiently.

Recommendations

Health educators should prioritize dedicating ample time to engage patients actively, attentively listen to their concerns, and foster open dialogue about their health issues during visits to the medical center. Supervisors at the medical center should systematically organize health educators, provide better preparation and support, and alleviate excessive workloads. Additionally, implementing regular training programs can augment their skills and expertise. Allocating additional space for educators'

professional growth and development within the medical center could substantially enhance their effectiveness and efficiency. There should be increased focus on improving communication and conflict resolution skills among health educators, given their pivotal role in effective patient management and satisfaction. Utilizing diverse media channels to disseminate information about diseases and healthcare knowledge can significantly elevate public awareness and, subsequently, enhance healthcare services in the region. Recognizing the crucial role of health education in bolstering medical center efficiency and emergency services, allocating more resources toward health education and personality development initiatives is essential for enhancing the hospital's quality and overall improvement.

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