

Barriers to Care-Seeking and Treatment Adherence Among Dermatology Patients in Makkah Saudi Arabia

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Abstract

Background: Barrier documentation and dermatology access are the primary steps to discourse the dermatological needs of the underserved population. Access to healthcare and following prescribed treatments can be challenging due to various factors, including socioeconomic status, cultural differences, health systems, and transportation issues.

Aim: This study aims to assess barriers to care-seeking and treatment adherence among dermatology patients in Makkah Saudi Arabia.

Methods and materials: A descriptive cross-sectional web-based study was conducted. Adults aged 18 years and above, living in Makkah Saudi Arabia who have visited a dermatology clinic before or have a chronic dermatological condition and who agree to participate in the study were included. The data were collected through a pretested, structured online questionnaire. The survey is divided into 3 sections covering socio-demographic data, barriers to care-seeking, and treatment adherence. The study survey was uploaded online using social media platforms, the data was extracted into a Microsoft Excel Spreadsheet and analyzed by SPSS data package version 21.

Results: A total of 270 eligible dermatology patient completed the study questionnaire. Patients' ages ranged from 18 to 91 years with a mean age of 28.1 ± 10.5 years old. A total of 193 (71.5%) of the patients avoided visiting a dermatologist because of a skin or hair problem, and 165 (61.1%) had difficulties finding a dermatologist or skin care specialist. Also, 224 (83%) had difficulty adhering to the treatment plan prescribed for their skin condition mainly due to taking a long time to apply treatments (37.1%), high medication cost (22.6%), and the treatment composition being unacceptable (15.4%).

Conclusion: In conclusion, the current study revealed that there was poor adherence of the dermatological patients for medical care mainly due to financial issues and difficulty in finding a dermatologist or having an appointment. Also. Patient commitment to the prescribed treatment or treatment plan was poor mainly due to drug cost or delayed response to treatment.

Keywords: dermatology; patients; adherence; medications; medical care; commitment; saudi arabia

1.Introduction

Skin diseases are a major health issue that affects many people worldwide, and it can have a significant impact on their quality of life [1, 2]. The World Health Organization (WHO) states that skin disease prevalence varies from 20% to 70% in different regions of the world.

[3]. Skin conditions are diverse, and they can range from acne, eczema, psoriasis, skin cancer, and many other acute and chronic conditions [4]. While most of these conditions have effective treatments, many patients face multiple challenges when it comes to accessing dermatological

health care services. Several barriers can affect the ability of treatment companies to deliver care effectively [5, 6].

The terms "adherence" and "compliance" are used to describe how well a person follows the healthcare provider's recommendations. "Adherence" is preferred as it portrays patients as active decision-makers in their medical care. In contrast, "compliance" suggests that patients are passive receivers of instructions from healthcare providers [7, 8].

Access to healthcare and following prescribed treatments can be challenging due to various factors, including socioeconomic status, cultural differences, health systems, and transportation issues [9, 10]. treatment adherence can also be impacted by side effects, forgetfulness, and a lack of motivation. These barriers are complex and multifactorial, and they can significantly affect an individual's ability to seek care and follow through with treatment [11].

People who suffer from skin diseases often experience a decrease in their quality of life [12]. However, they cannot always be trusted to take the prescribed medication as directed.

The adherence rate is generally low for systemic treatments, and even worse for topical

treatments, as they can be messier and more time-consuming to apply. The current study aimed to assess dermatology patients' barriers to care-seeking and treatment adherence in Makkah Saudi Arabia.

Methods and materials

A descriptive cross-sectional web-based study was conducted to assess dermatology patients' adherence and barriers to seeking medical care and treatment. Adults aged 18 years and above, living in Makkah Saudi Arabia who have visited a dermatology clinic before or have a chronic dermatological condition and who agree to participate in the study were included. Children under 18 years old, who haven't visited a dermatology clinic before or don't have a chronic dermatological condition, and Those who refused to participate in the study were excluded. The sample size was calculated using Daniel's sample size formula will be 385 participants, a margin of error equals 5%, and a confidence level of 95%. The duration of the data collection is around 3 months, and the study period overall is 12 months. The data were collected through a pretested, structured online questionnaire preceded by consent and ensured to maintain the confidentiality of the data. The questionnaire was developed by the study researchers from the literature and expert opinions and was translated into the Arabic language. The validity of the questionnaire was

tested through a pilot study. The validated questionnaire included 28 items to assess the barriers to care-seeking and treatment adherence among dermatology patients in Makkah Saudi Arabia. The survey is divided into 3 sections, the first section for informed consent from the participants, the second part includes socio-demographic data (age, gender, educational level, and marital status), and the third part includes items assessing the barriers to care-seeking and treatment adherence (20 items). The data were gathered from trained data collectors from all over the Makkah Region in Saudi Kingdom, was distribute the survey through social media platforms, such as Facebook, Twitter, Instagram, and WhatsApp. Then, the data was extracted into a Microsoft Excel Spreadsheet.

Data analysis

The data were collected, reviewed, and then fed to Statistical Package for Social Sciences version 21 (SPSS: An IBM Company). All statistical methods used were two-tailed with an alpha level of 0.05 considering significance if P value less than or equal to 0.05. Descriptive analysis was done by prescribing frequency distribution and percentage for study variables including dermatology patients' data, having health insurance, difficulties and barriers to care-seeking, and barriers to treatment adherence. Also, dermatology patient's knowledge and awareness of skin diseases were tabulated. Satisfaction of dermatology patients about provided care and dermatology patients' suggestions for improving care-seeking and treatment adherence were graphed. Cross tabulation for showing factors associated with dermatology patients' treatment adherence was carried out with Pearson chi-square test for significance and exact probability test if there were small frequency distributions.

Results

Socio-demographic

A total of 270 eligible dermatology patients completed the study questionnaire. Patients ages ranged from 18 to 91 years with a mean age of 28.1 ± 10.5 years old. A total of 182 (67.4%) patients were females and most of them (92.2%) were Saudi. As for educational level, 187 (69.3%) had bachelor degree, 50 (18.5%) had secondary educational level and 25 (9.3%) had post-graduate degree. A total of 143 (53%) were students, and 90 (33.3%) were employee. Monthly income less than 5000 SR was reported among 141 (52.2%) patents and 57 (21.1%) had monthly income 5000-10000 SR and only 30 (11.1%) had monthly income exceeding 15000 SR. A total of 98 (36.3%) had medical insurance (Table1).

Personal data	No	%
Age in years		
< 20	50	18.5%
21-29	135	50.0%
30-39	46	17.0%
40+	39	14.4%
Gender		
Male	88	32.6%
Female	182	67.4%
Nationality		
Saudi	249	92.2%
Non-Saudi	21	7.8%
Educational level		
Below secondary	8	3.0%
Secondary	50	18.5%
Bachelor degree	187	69.3%
Post-graduate degree	25	9.3%
Work		
Not working / retired	37	13.7%
Student	143	53.0%

Employee	90	33.3%
Monthly income		
< 5000 SR	141	52.2%
5000-10000 SR	57	21.1%
10000-15000 SR	42	15.6%
> 15000 SR	30	11.1%
Do you have insurance		
Yes	98	36.3%
No	172	63.7%

Table 1: Personal characteristics of dermatology patients in Makkah Saudi Arabia

Barriers affected patient accessibility to dermatological services and adherence to treatment plan.

Table 2. Difficulties and barriers to care-seeking among dermatology patients in Makkah Saudi. A total of 193 (71.5%) of the patients avoided

visiting a dermatologist because of a skin or hair problem, 165 (61.1%) had difficulties finding a dermatologist or skin care specialist, 130 (48.1%) had difficulties making an appointment with a dermatologist or skin care specialist, and 124 (45.9%) encountered difficulties accessing dermatology services due to location or transportation.

Difficulties	Count	Column N %
Have you ever avoided visiting a dermatologist because of a skin or hair problem?		
Yes		71.5%
No	77	28.5%
Have you had any difficulties finding a dermatologist or skin care specialist?		
Yes		61.1%
No		38.9%
Have you had difficulties making an appointment with a dermatologist or skin care specialist?		
Yes	0	48.1%
No	0	51.9%
Have you encountered any difficulties accessing dermatology services due to location or transportation?		
Yes		45.9%
No		54.1%

Table 2: Difficulties and barriers to care-seeking among dermatology patients in Makkah Saudi

Table 3. Barriers to Treatment adherence among dermatology patients in Makkah Saudi Arabia. As for the reason for non-seeking for having medications for skin conditions, the most reported were financial challenges and/or health insurance issues (27.1%), Challenges with health services (26%), use of alternative therapy (folk medicine) (17.2%), and lack of symptoms (13%). A total of 193 (71.5%) faced difficulties in obtaining medications prescribed by your dermatologist, where the most reported included the high cost of the treatment (70.2%), lack of treatment in pharmacies (49.2%), treatment requiring frequent refilling or

replenishment (35.6%), and treatment is not available in their area (28.3%). Also, 224 (83%) had difficulty adhering to the treatment plan prescribed for their skin condition mainly due to taking a long time to apply treatments (37.1%), high medication cost (22.6%), the treatment composition being unacceptable (15.4%), Unpleasant Side effects (11.8%), and Complicated treatment plan (11.8%). Exact of 156 (57.8%) modified their prescribed treatment plan for a skin condition without consulting a dermatologist mainly due to Delayed improvement (59.6%), desire to try another treatment plan (47.4%), and side effects (29.5%).

Medications adherence	No	%
What is the reason for non-seeking for having medications for skin conditions?		
Financial challenges and/or health insurance issues	52	27.1%
Challenges with health services	50	26.0%
Use of alternative therapy (folk medicine)	33	17.2%
My health condition is good and I have no symptoms	25	13.0%
Lack of trust in the doctor	21	10.9%
Cultural challenges	6	3.1%
Others	5	2.6%
Have you faced any difficulties in obtaining medications prescribed by your dermatologist?		
Yes	193	71.5%
No	77	28.5%
If yes, mention these difficulties		

The cost of treatment was very high	134	70.2%
It was difficult to find treatment in pharmacies	94	49.2%
Treatment requires frequent refilling or replenishment	68	35.6%
The treatment is not available in my area	54	28.3%
Others	2	1.0%
Have you had difficulty adhering to the treatment plan prescribed for your skin condition?		
Yes	224	83.0%
No	46	17.0%
What is the reason for non-compliance with the prescribed treatment or medication?		
Takes long time to apply treatments	82	37.1%
High medication cost	50	22.6%
The treatment composition is unacceptable	34	15.4%
Unpleasant Side effects	26	11.8%
Complicated treatment plan	26	11.8%
Takes long time to treat	3	1.4%
Have you modified your prescribed treatment plan for a skin condition without consulting a dermatologist?		
Yes	156	57.8%
No	114	42.2%
If yes, why you modified		
Delayed improvement	93	59.6%
Desire to try another treatment plan	74	47.4%
Medications side effects	46	29.5%

Table 3: Barriers to Treatment adherence among dermatology patients in Makkah Saudi Arabia

Participants overall satisfaction with the provided dermatological care.

Figure 1. Satisfaction of dermatology patients about provided care and dermatologists' role. Exact of 187 (69.3%) of the patients think

dermatologists and skin care specialists are adequately trained to treat skin conditions. On the other hand, 152 (56.3%) felt dissatisfied with the information given to them by their dermatologist and 30 (11.1%) were unable to understand the diagnosis provided by a dermatologist.

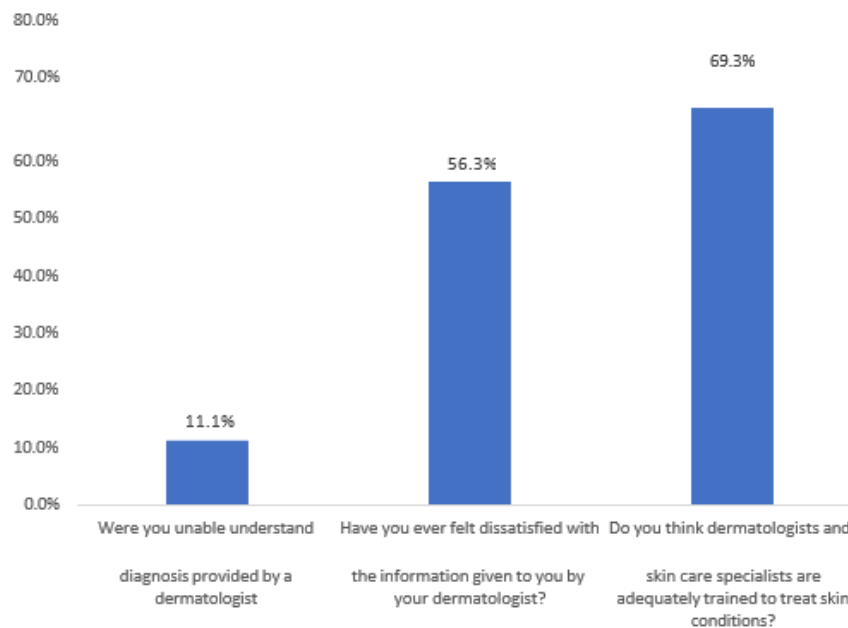


Figure 1: Satisfaction of dermatology patients about provided care and dermatologists role

Figure 2. Dermatology patients' suggestions for improving care-seeking and treatment adherence. The most reported suggestions were Providing medical centers specialized in dermatology in different regions of the Kingdom (66%), Providing remote consultation services for skin disease patients in the Kingdom (57%), Increasing the numbers of dermatologists

in the Kingdom (55%), and Providing awareness and educational programs to the public about skin diseases (47%).

Providing medical centers specialized in dermatology in different regions of the 66% Kingdom

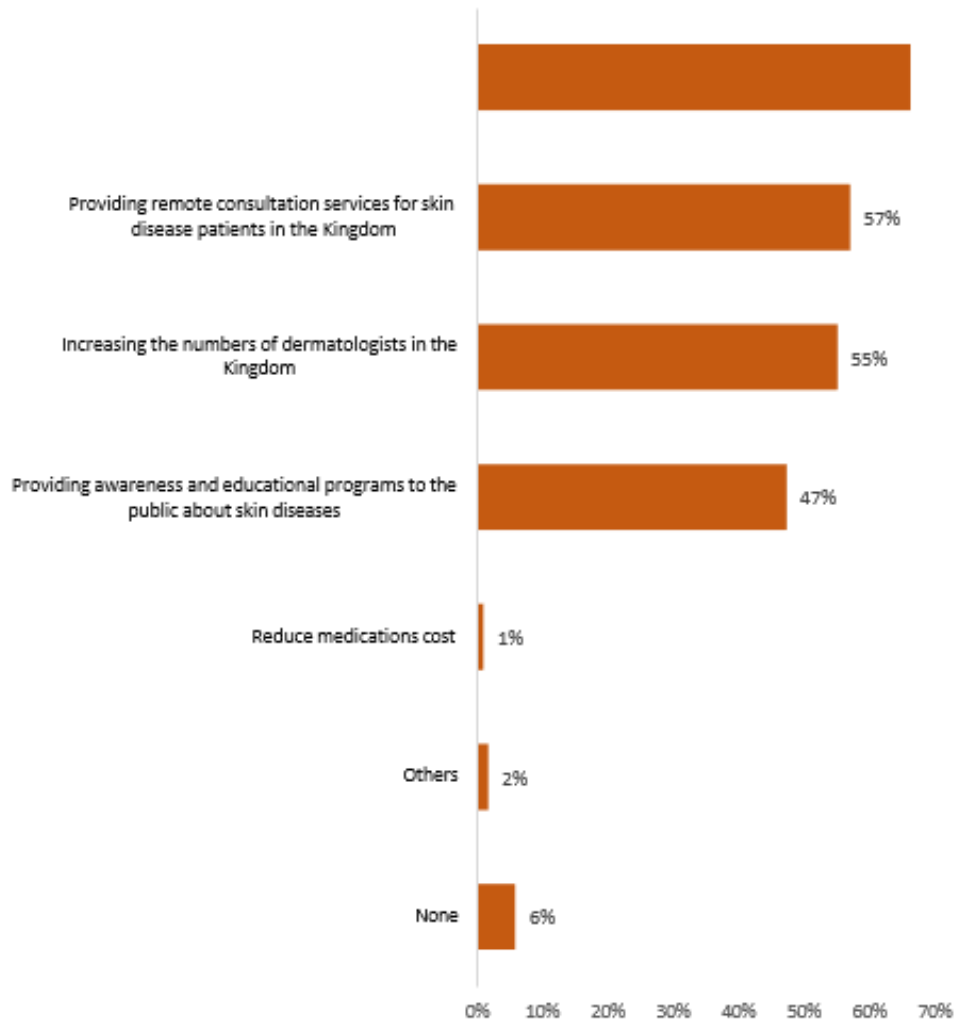


Figure 2: Dermatology patients' suggestions for improving care-seeking and treatment adherence

Table 4. Dermatology patient's knowledge and awareness of skin diseases, Makkah, Saudi Arabia. A total of 133 (49.2%) of the patients reported having good to excellent knowledge about skin diseases. The

most reported sources of information included social media and the internet (43%), dermatologists (21.9%), and Personal experience (20%).

Knowledge	No	%
How would you rate your general knowledge of skin diseases?		
Very poor	6	2.2%
Poor	40	14.8%
Intermediate	91	33.7%
Good	80	29.6%
Excellent	53	19.6%
Source of information about skin diseases		
Social media / internet	116	43.0%
Dermatologists	59	21.9%
Personal experience	54	20.0%
Family / friends	41	15.2%

Table 4: Dermatology patient's knowledge and awareness of skin diseases, Makkah, Saudi Arabia

Factors	Have you had difficulty adhering to the treatment plan prescribed for your skin condition?				p-value
	Yes		No		
	No	%	No	%	
Age in years					
< 20	41	82.0%	9	18.0%	
21-29	119	88.1%	16	11.9%	.099
30-39	34	73.9%	12	26.1%	
40+	30	76.9%	9	23.1%	
Gender					
Male	77	87.5%	11	12.5%	.186
Female	147	80.8%	35	19.2%	
Nationality					
Saudi	206	82.7%	43	17.3%	.727
Non-Saudi	18	85.7%	3	14.3%	
Educational level					
Below secondary	3	37.5%	5	62.5%	
Secondary	42	84.0%	8	16.0%	.001*
Bachelor degree	163	87.2%	24	12.8%	
Post-graduate degree	16	64.0%	9	36.0%	
Work					
Not working/retired	24	64.9%	13	35.1%	.006*
Student	121	84.6%	22	15.4%	
Employee	79	87.8%	11	12.2%	
Do you have insurance?					
Yes	83	84.7%	15	15.3%	.568
No	141	82.0%	31	18.0%	
Have you faced any difficulties in obtaining medications prescribed by your dermatologist?					.001*
Yes	170	88.1%	23	11.9%	
No	54	70.1%	23	29.9%	
Have you modified your prescribed treatment plan for a skin condition without consulting a dermatologist?					.013*
Yes	137	87.8%	19	12.2%	
No	87	76.3%	27	23.7%	
How would you rate your general knowledge of skin diseases?					
Very poor	3	50.0%	3	50.0%	
Poor	36	90.0%	4	10.0%	.002*^
Intermediate	79	86.8%	12	13.2%	
Good	70	87.5%	10	12.5%	
Excellent	36	67.9%	17	32.1%	
Source of information about skin diseases					
Dermatologists	52	88.1%	7	11.9%	
Social media / internet	104	89.7%	12	10.3%	.001*^
Family / friends	32	78.0%	9	22.0%	
Personal experience	36	66.7%	18	33.3%	

Table 5: Factors associated with dermatology patients' treatment adherence Table 4. Dermatology patient's knowledge and awareness of skin diseases, Makkah, Saudi Arabia

Discussion

Non-adherence to medication is linked with poor medical conditions, higher occurrence of comorbidities, increased costs, and higher mortality rates [13]. The World Health Organization estimated that in 2003, the average adherence rate among patients with chronic diseases in developed countries was 50%, and even lower in developing countries. From 2005 to 2007, nearly 500,000 emergency department visits were related to

medication non-adherence [14,15]. Nationally, the cost of hospital admissions due to medication non-adherence approaches nearly 100 billion US dollars per year [16].

The current study aimed to assess barriers to care-seeking and treatment adherence among dermatology patients in Makkah Saudi Arabia. Regarding medical care, the study revealed that most of the patients avoided visiting a dermatologist because of a skin or hair problem which

is similar to Venkatesh K et al. [17], where 51.8% of participants avoided or delayed dermatology care. Also, nearly two-thirds of them had

difficulties finding a dermatologist or skin care specialist, and nearly half of the patients had difficulties making an appointment with a dermatologist or a skin care specialist. Likewise, less than half of them encountered difficulties accessing dermatology services due to location or transportation. Taber JM et al. [18], identified three main categories of reasons for people avoiding medical care. Firstly, over one-third of the participants (33.3%) felt negatively about seeking medical care, for reasons related to physicians, healthcare organizations, or affective concerns. Secondly, a subset of participants (12.2%) reported a low perceived need to seek medical care, often because they believed their illness or symptoms would improve over time (4.0%). Thirdly, many participants (58.4%) reported traditional barriers to medical care, such as high costs (24.1%), no health insurance (8.3%), and time constraints (15.6%).

Based on these results, we developed a conceptual model of medical care avoidance. Other studies revealed that traditional barriers limiting access to or ease of seeking medical care included lack of health insurance and time constraints [19-25]. According to many reports, some people have expressed negative experiences when seeking medical care. These experiences include problems with communication and concerns about the trustworthiness and expertise of physicians. This is in line with previous research that highlights the importance of a good patient-physician relationship and medical trust in maintaining medication adherence, healthcare utilization, and positive health outcomes [26-29]. In the dermatology field, Duniphin DD [30], showed that the three most significant barriers to accessing healthcare were being uninsured (36.4%), living in an area with a shortage of medical resources (22.0%), and living below the federal poverty level (33.0%). The use of teledermatology was supported by 90.90% of participants as an additional way to receive healthcare, with 81.8% saying it would improve access to care. The convenience of the service was also highlighted as a benefit by 72.7% of respondents. According to Cyr ME et al. [31], limited access to dermatology specialists is caused by rural residence and socioeconomic barriers in underserved populations.

Concerning treatment adherence, the vast majority of the study participants had difficulty adhering to the treatment plan prescribed for their skin condition. The most reported reasons included taking a long time to apply treatments, high medication costs, the treatment composition being unacceptable, and unpleasant Side effects. Also, it was clear that most of the patients faced difficulties in obtaining medications prescribed by their dermatologist, where the most reported included the high cost of the treatment, lack of treatment in pharmacies, treatment requiring frequent refilling or replenishment, and treatment not available in their area. More than half of the current study patients modified their prescribed treatment plan for a skin condition without consulting a dermatologist mainly due to delayed improvement, their desire to try another treatment plan, and side effects. In a study by Venkatesh K et al. [17], it was found that 22.7% of patients did not follow their dermatologist's treatment recommendations which is much lower than reported in the current study. The reasons for nonadherence included side effects and adverse events, high treatment cost, complexity of the treatment plan and forgetfulness, disagreement, or distrust with the healthcare provider (13.2%), and perceived lack of medication efficacy. Two studies conducted at dermatology clinics looked at newly prescribed medications and found that only 82% and 65% of patients, respectively, filled their prescriptions [31,32]. In terms of adherence to topical agents for actinic keratoses, one study with 305 patients found a rate of 37%, whereas another study with 19 patients found a rate of 86%. [33,34].

As for suggestions to improve patient adherence, the most reported by the study patients included providing medical centers specialized in dermatology in different regions of the Kingdom, providing remote consultation services for skin disease patients in the Kingdom, Increasing

the numbers of dermatologists in the Kingdom, and Providing awareness and educational programs to the public about skin diseases where all were reported by at least half of the respondents.

Limitation and recommendations

Our study faced several limitations being a cross-sectional study using an online questionnaire may affect the sample's representativeness as only those who can read and have smartphones will participate in the study. This in turn may affect the generalizability of the results. Also, most of the participants were females which may underestimate the male related satisfaction.

There are several avenues for future research. Larger nationwide studies incorporating both rural and urban areas are needed to develop a comprehensive understanding of healthcare barriers faced across different domains in the country. Qualitative research methods like interviews could provide richer insights into patients' experiences navigating the healthcare system and how it influences their behaviors. Furthermore, intervention research is required to evaluate strategies to enhance access and adherence, such as subsidizing treatment costs, establishing transportation services, utilizing telemedicine approaches, and other integrated solutions targeting multiple barriers simultaneously. Prospective research designs can help establish how barriers and facilitating factors change over the course of chronic skin conditions, and their long-term impact on health outcomes. There is also a need to explore patient and provider predictors of adherence to aid the development of tailored programs that promote shared decision making and self-management support. Overall, addressing the barriers identified through effective, evidence-based interventions can help improve health outcomes and quality of life for patients with dermatological conditions.

Conclusion

In conclusion, the current study revealed that there was poor adherence of the dermatological patients for medical care mainly due to financial issues and difficulty in finding a dermatologist or having an appointment. Also, Patient commitment to the prescribed treatment or treatment plan was poor mainly due to drug cost or delayed response to treatment. Additionally, more than half of the patients not only were incompliant but also modified the treatment prescribed. Periodic health education, assessing patients' preferences and modifying barriers can help in improving patient adherence.

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