

Knowledge and Attitude towards Vitiligo and Psoriasis among Undergraduate Medical Students: A Cross-sectional Observational Study

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ABSTRACT

Introduction: Understanding the perspective on vitiligo and psoriasis of undergraduate medical students enables us to focus on lacunae areas in their knowledge, and train them to disseminate accurate information to the public. A positive attitude towards vitiligo and psoriasis in society will reduce the psychosocial burden on the patients and deliver better clinical outcomes.

Aim: To assess medical student's knowledge and attitudes towards vitiligo and psoriasis.

Materials and Methods: This cross-sectional, questionnaire-based, observational study was conducted on 351 undergraduate medical students (third semester onwards) at Sri Devaraj Urs Medical College, Kolar, Karnataka, India, from January 2021 to March 2021. Questionnaire consisted of 28 questions about knowledge and 18 about attitude towards vitiligo and psoriasis, presented through Google docs to the medical students. A score of 75% was considered as having 'good knowledge' and 'positive attitude.' Fischer's-exact test was used as a test of significance for qualitative data. Analysis of Variance (ANOVA) was used as a test of significance to identify the mean difference between

more than two quantitative variables. The p-value <0.05 was considered as statistically significant.

Results: The study included 351 participants, of which 171 (48.7%) were females and 180 (51.3%) were males. There were 89 (25.3%), 133 (37.9%), and 129 (36.8%) respondents from the second, third, and fourth years, respectively. Good knowledge was observed in 80.9% and 71.5%, and 87.7% and 72.4% had positive attitudes towards vitiligo and psoriasis, respectively. A statistically significant difference (p-value=0.002) was found in attitude between vitiligo and the year of MBBS. A statistically significant difference (p-value=0.004) was found in knowledge between psoriasis and the year of MBBS. Overall, 55.84% thought that psoriasis only concerns the skin. Good knowledge was directly proportional to a positive attitude.

Conclusion: The majority of the undergraduate medical students had 'good knowledge' and 'positive attitude' towards vitiligo and psoriasis. Good knowledge was highly proportional to a positive attitude. Unfortunately, a considerably high number of participants reported that they would not marry a person with vitiligo or psoriasis.

Keywords: Behaviour, Education, Psychosocial, Stigma, Treatment

INTRODUCTION

Vitiligo is a chronic autoimmune skin disease characterised by chalky white depigmented macules on various body parts [1]. Even though vitiligo is an asymptomatic disease, it affects the psyche of the vitiligo patients, especially amongst the Indians, as most of the population is coloured (Fitzpatrick scale IV or V). Two prior studies on the psychosocial aspects have shown that vitiligo may profoundly impact patient's self-esteem and interpersonal relationships [1-4]. Vitiligo patients experience stigmatisation, embarrassment, and self-consciousness [4]. Psoriasis is a chronic inflammatory disease characterised by erythematous scaly plaques [5]. Earlier studies have shown a heightened risk for adverse effects such as severe mental health outcomes, including anxiety, depression, substance abuse, and suicidality [6,7]. Visible lesions are a part of the social stigma perceived by these patients [8-12].

Biases against persons with other visible skin diseases are well documented among healthcare trainees and physicians. This adversely affects clinical care by hindering stigmatised individuals from receiving treatment [5,13,14]. Effects of stigma on Quality of Life (QOL) may be dependent on disease severity. Vitiligo patients are more likely to adopt alternative medicines than other cosmetic dermatoses, in which they commonly use allopathy [1]. A study from India reported that 55.7% of vitiligo patients believed in the efficacy of alternative medicine compared to 51.7% having confidence in

allopathy [1]. Overall, uncovering medical professionals' responses to questionnaires designed to evaluate their knowledge and attitude in persons with psoriasis and vitiligo will help promote steps in reducing stigma [5,14-17].

Assessing the knowledge and attitude of undergraduate medical students would give us a glance at their understanding of the disease. In addition, comprehending the lacuna in their knowledge would help develop educational campaigns to release appropriate knowledge and improve attitude. Medical students with sufficient knowledge about vitiligo and psoriasis will disseminate and educate the public. Adequate knowledge in public will significantly contribute to their attitude towards these patients [5,11-13]. Students will eventually counsel the patients and their families satisfactorily about the disease causes, course, prognosis, treatment options. Such modifications will reduce significant psychological stress, improving the patient's treatment efficacy [5,12-16]. A cardinal feature of vitiligo and psoriasis that requires monitoring and intervention is the knowledge and attitude of society [14-17].

Previous studies have concluded the public's knowledge to be inadequate, along with negative attitude towards vitiligo and psoriasis patients [17-19]. However, very few studies have approached this issue from a medical student's perspective. The aim of this study was to explore the knowledge and attitude towards vitiligo and psoriasis amongst undergraduate medical students in a tertiary healthcare

centre. A multifaceted understanding of medical student's opinions of vitiligo and psoriasis will encourage advanced efforts to overcome stigma, enhance QOL, and improve treatment utilisation.

MATERIALS AND METHODS

This cross-sectional, questionnaire-based, observational study was conducted on 351 undergraduate medical students (third semester onwards) at Sri Devaraj Urs Medical College, Kolar, Karnataka, India, from January 2021 to March 2021. The Institutional Ethics Board approved the study (Ethical clearance number- DMC/KLR/IEC/722/2020-21). Confidentiality and privacy of the participants was ensured by excluding identification details. Authors considered 75% as the anticipated good knowledge and positive attitudes in the study population.

Sample size calculation: The sample size was calculated on a hospital-based study that showed that 66.3% of participants had a good knowledge score [95% Confidence Interval (CI)] [1]. By taking the expected proportion to be 0.663, 95% CI with an α -error of 5%, the required sample size was 343.

Inclusion criteria: All third semester onwards MBBS students, who consented to be a part of the study, were included in study.

Exclusion criteria: Students with vitiligo or psoriasis, students whose first-degree relatives with these diseases were excluded from the study.

Procedure

All participants were asked to fill two questionnaires-

- One to assess their knowledge (consisted of 14 questions each about vitiligo and psoriasis),
- The other questionnaire had 9 questions each to assess their attitude.

Each questionnaire was given 10 minutes to complete. The questionnaires were adapted from two studies assessing the knowledge and attitude towards vitiligo and psoriasis [20,21]. Few questions were then modified as per the study needs by the researchers and validated by two dermatologists.

Participants filled the questionnaires online through google forms as provided by the principal investigator. Incomplete questionnaires were not accepted as a part of the study.

For the knowledge component of the study instrument, a score of 1 was given for every correct answer, and for the attitude component; a score of 1 was given for a positive attitude. The total score was 14 for knowledge, and 9 for attitude in vitiligo and psoriasis each. The participant who scored 75% and above was considered as having 'good knowledge' and below was considered to have 'poor knowledge'. A score of 75% and above will be scored as 'positive attitude' and below will be considered to have 'negative attitude' in this study population.

STATISTICAL ANALYSIS

MS Excel, Statistical Package for the Social Sciences (SPSS) version 22.0 (IBM SPSS Statistics, Somers NY, USA) was used to analyse data. Categorical data was represented in the form of frequencies and proportions. The Chi-square test or Fischer's-exact test (for 2x2 tables only) was used as a test of significance for qualitative data. Continuous data were represented as mean and standard deviation. Independent t-test was used as a test of significance to identify the mean difference between two quantitative variables. Analysis of Variance (ANOVA) was used as a test of significance to identify the mean difference between more than two quantitative variables. Graphical representation of data: MS Excel and MS word was used to obtain various types of graphs. The p-value <0.05 was considered as statistically significant after assuming all the rules of statistical tests.

RESULTS

The study included 351 participants, of which 171 (48.7%) were females and 180 (51.3%) were males. There were 89 (25.3%),

133 (37.9%), and 129 (36.8%) respondents from the second, third, and fourth years, respectively. The participant's knowledge and attitude about vitiligo and psoriasis are summarised in [Table/Fig-1-5].

S. No.	Knowledge component	Fourth years (n, %)	Third years (n, %)	Second years (n, %)	Total (n, %)
1.	Vitiligo is more prevalent and exaggerated with exposure to psychological stress "YES"	107 (82.31%)	103 (78.03%)	60 (67.42%)	270 (76.92%)
2.	Vitiligo is a disease of the immune system "YES"	111 (85.38%)	87 (65.91%)	70 (78.65%)	268 (76.35%)
3.	Vitiligo caused by unknown aetiology "YES"	113 (86.92%)	104 (78.79%)	59 (66.29%)	276 (78.63%)
4.	There is a treatment for vitiligo "YES"	99 (76.15%)	93 (70.45%)	59 (66.29%)	251 (71.51%)
5.	Vitiligo is a hereditary disease "NO"	67 (51.54%)	78 (59.09%)	33 (37.08%)	178 (50.71%)
6.	Vitiligo is an infectious disease "NO"	124 (95.38%)	116 (87.88%)	76 (85.39%)	316 (90.03%)
7.	Vitiligo is associated with the habitual intake of certain foods "NO"	105 (80.77%)	91 (68.94%)	63 (70.79%)	259 (73.79%)
8.	Vitiligo contagious by sharing things "NO"	113 (86.92%)	128 (96.97%)	81 (91.01%)	322 (91.74%)
9.	Vitiligo caused by lack of hygiene "NO"	123 (94.62%)	122 (92.42%)	80 (89.89%)	325 (92.59%)
10.	Vitiligo is leprosy "NO"	118 (90.77%)	128 (96.97%)	84 (94.38%)	330 (94.02%)
11.	Vitiligo contagious by touching "NO"	121 (93.08%)	128 (96.97%)	85 (95.51%)	334 (95.16%)
12.	Vitiligo contagious by having a meal together "NO"	123 (94.62%)	128 (96.97%)	83 (93.26%)	334 (95.16%)
13.	Vitiligo contagious by air transmission "NO"	118 (90.77%)	129 (97.73%)	85 (95.51%)	332 (94.59%)
14.	Vitiligo is a dangerous disease "NO"	103 (79.23%)	127 (96.21%)	79 (88.76%)	309 (88.03%)
	Average	84.89%	84.523%	80.016%	83.51%

[Table/Fig-1]: Knowledge about vitiligo-students who answered correctly.

S. No.	Attitude component	Fourth years (n, %)	Third years (n, %)	Second years (n, %)	Total (n, %)
1.	I would sympathise for a patient having vitiligo "YES"	120 (92.31%)	113 (85.61%)	75 (84.27%)	308 (87.75%)
2.	I would ask vitiligo patients about their disease "YES"	114 (87.69%)	93 (70.45%)	49 (55.06%)	256 (72.93%)
3.	I stare patients with vitiligo "NO"	128 (98.46%)	127 (96.21%)	84 (94.38%)	339 (96.58%)
4.	I would avoid shaking hands with a vitiligo patient "NO"	127 (97.69%)	126 (95.45%)	81 (91.01%)	334 (95.16%)
5.	I would eat food prepared by a vitiligo patient "YES"	127 (97.69%)	125 (94.70%)	80 (89.89%)	332 (94.59%)
6.	I would share food with vitiligo patient "YES"	127 (97.69%)	125 (94.70%)	82 (92.13%)	334 (95.16%)
7.	As an employer, I would hire a vitiligo patient "YES"	128 (98.46%)	125 (94.70%)	87 (97.75%)	340 (96.87%)
8.	I would marry a vitiligo patient "YES"	86 (66.15%)	94 (71.21%)	53 (59.55%)	233 (66.38%)
9.	I would continue marital live with vitiligo patient "YES"	106 (81.54%)	106 (80.30%)	72 (80.90%)	284 (80.91%)
	Average	90.85%	87.036%	82.77%	87.37%

[Table/Fig-2]: Attitude towards vitiligo-students with positive attitude.

No statistically significant difference was found between knowledge regarding vitiligo and the year (in between second, third, and fourth years) of MBBS. However, there was a statistically significant difference (p-value=0.002) between attitude towards vitiligo and the year of MBBS [Table/Fig-6]. A 73% (65/89), 84.1% (111/133), and 83.1% (108/129) of students from second, third, and fourth years, respectively, had good knowledge about vitiligo. A 79.8% (71/89), 85.6% (113/133), and 95.4% (124/129) of students from

second, third, and fourth years, respectively, had a positive attitude towards vitiligo.

S. No.	Knowledge component	Fourth years (n, %)	Third years (n, %)	Second years (n, %)	Total (n, %)
1.	Psoriasis is more prevalent and exaggerated with exposure to psychological stress "YES"	113 (86.92%)	117 (88.64%)	69 (77.53%)	299 (85.19%)
2.	Psoriasis is a disease of the immune system "YES"	110 (84.62%)	93 (70.45%)	76 (85.39%)	279 (79.49%)
3.	Psoriasis caused by unknown aetiology "YES"	103 (79.23%)	100 (75.76%)	44 (49.44%)	247 (70.37%)
4.	There is a treatment for psoriasis "YES"	120 (92.31%)	110 (83.33%)	72 (80.90%)	302 (86.04%)
5.	Psoriasis is a hereditary disease "NO"	93 (71.54%)	82 (62.12%)	48 (53.93%)	223 (63.53%)
6.	Psoriasis is an infectious disease "NO"	104 (80.00%)	95 (71.97%)	61 (68.54%)	260 (74.07%)
7.	Psoriasis is a disease that only concerns the skin "NO"	55 (42.31%)	60 (45.45%)	40 (44.94%)	155 (44.16%)
8.	Psoriasis is contagious by sharing things "NO"	111 (85.38%)	101 (76.52%)	67 (75.28%)	279 (79.49%)
9.	Psoriasis is caused by lack of hygiene "NO"	113 (86.92%)	104 (78.79%)	63 (70.79%)	280 (79.77%)
10.	Psoriasis is leprosy "NO"	127 (97.69%)	129 (97.73%)	82 (92.13%)	338 (96.30%)
11.	Psoriasis is contagious by touching "NO"	127 (97.69%)	118 (89.39%)	78 (87.64%)	323 (92.02%)
12.	Psoriasis is contagious by having a meal together "NO"	128 (98.46%)	121 (91.67%)	82 (92.13%)	331 (94.30%)
13.	Psoriasis is contagious by air transmission "NO"	127 (97.69%)	123 (93.18%)	83 (93.26%)	333 (94.87%)
14.	Psoriasis is a dangerous disease "NO"	114 (87.69%)	115 (87.12%)	66 (74.16%)	295 (84.05%)
	Average	84.889%	79.437%	74.71%	80.26%

[Table/Fig-3]: Knowledge about psoriasis-students who answered correctly.

S. No.	Attitude component	Fourth	Third	Second	Total
1.	I would sympathise for a patient having psoriasis "YES"	126 (96.92%)	120 (90.91%)	78 (87.64%)	324 (92.31%)
2.	I would ask psoriasis patients about their disease "YES"	119 (91.54%)	90 (68.18%)	56 (62.92%)	265 (75.50%)
3.	I stare patients with psoriasis "NO"	128 (98.46%)	126 (95.45%)	80 (89.89%)	334 (95.16%)
4.	I would avoid shaking hands with a psoriasis patient "NO"	118 (90.77%)	112 (84.85%)	70 (78.65%)	300 (85.47%)
5.	I would eat food prepared by a psoriasis patient "YES"	117 (90.00%)	114 (86.36%)	71 (79.78%)	302 (86.04%)
6.	I would share food with psoriasis patient "YES"	104 (80.00%)	119 (90.15%)	75 (84.27%)	298 (84.90%)
7.	As an employer, I would hire a psoriasis patient "YES"	105 (80.77%)	124 (93.94%)	73 (82.02%)	302 (86.04%)
8.	I would marry a psoriasis patient "YES"	64 (49.23%)	90 (68.18%)	45 (50.56%)	199 (56.70%)
9.	I would continue marital live with psoriasis patient "YES"	88 (67.69%)	98 (74.24%)	61 (68.54%)	247 (70.37%)
	Average	82.82%	83.584%	76.03%	81.387%

[Table/Fig-4]: Attitude towards psoriasis-students with positive attitude.

A 59.6% (53/89), 71.2% (94/133), and 80% (104/129) of students from second, third, and fourth years, respectively, had good knowledge about psoriasis. A 65.2% (58/89), 75% (99/133), and 74.6% (97/129) and of students from second, third, and fourth years, respectively, had positive attitude towards psoriasis. A statistically significant difference (p-value=0.004) was found between knowledge regarding psoriasis and the year of MBBS. Nevertheless, there was no statistically significant difference found between attitude towards psoriasis and year of MBBS [Table/Fig-6]. Students had better knowledge and attitude scores regarding vitiligo than psoriasis.

Variables	Answers	Students (n, %)
Knowledge about vitiligo	Good	284 (80.9%)
	Poor	67 (19.1%)
Attitude towards vitiligo	Negative	43 (12.3%)
	Positive	308 (87.7%)
Knowledge about psoriasis	Good	251 (71.5%)
	Poor	100 (28.5%)
Attitude towards psoriasis	Negative	97 (27.6%)
	Positive	254 (72.4%)

[Table/Fig-5]: Students with good knowledge and showed positive attitude.

Variables	Year			p-value
	Fourth N (%)	Third N (%)	Second N (%)	
Vitiligo				
Knowledge				
Good	108 (83.1%)	111 (84.1%)	65 (73%)	0.89
Poor	22 (16.9%)	21 (15.9%)	24 (27%)	
Attitude				
Negative	6 (4.6%)	19 (14.4%)	18 (20.2%)	0.002
Positive	124 (95.4%)	113 (85.6%)	71 (79.8%)	
Psoriasis				
Knowledge				
Good	104 (80.0%)	94 (71.2%)	53 (59.6%)	0.004
Poor	26 (20.0%)	38 (28.8%)	36 (40.4%)	
Attitude				
Negative	33 (25.4%)	33 (25.0%)	31 (34.8%)	0.213
Positive	97 (74.6%)	99 (75.0%)	58 (65.2%)	

[Table/Fig-6]: Comparison of knowledge and attitude of vitiligo and psoriasis according to the year of MBBS. p-value <0.05 was considered as statistically significant; Chi-square test

The mean score of knowledge and attitude regarding vitiligo and psoriasis according to the year of MBBS were calculated. As per the overall mean score, p-value <0.001, therefore a statistically significant difference between knowledge and attitude regarding vitiligo among participants. The p-value <0.001; hence a statistically significant difference between knowledge and attitude regarding psoriasis among participants [Table/Fig-7].

Variables	Fourth year Mean±SD	Third year Mean±SD	Second year Mean±SD	p-value
Vitiligo				
Knowledge	11.88±1.99	11.83±1.85	11.20±1.94	0.021
Attitude	8±1	8±1	7±1	<0.001
Psoriasis				
Knowledge	12±2	11±2	10±2	<0.001
Attitude	7±2	8±2	7±2	0.007

[Table/Fig-7]: Comparison of mean score of knowledge and attitude of vitiligo and psoriasis according to year of MBBS. p-value <0.05 was considered as statistically significant; ANOVA

A higher proportion of students with a positive attitude had good knowledge {90.1% (256/284)} in comparison to students with poor knowledge {77.6% (52/67)} towards vitiligo. A more significant percentage of students with negative attitude {22.4% (15/67)} had poor knowledge when compared to good knowledge {9.9% (28/284)} about vitiligo. Most of the students with a positive attitude had good knowledge {80.5% (202/251)} in comparison to students with poor knowledge {52% (52/100)} towards psoriasis. A higher percentage of students with negative attitude had poor knowledge {48% (48/100)} when compared to good knowledge {19.5% (49/251)} about psoriasis.

DISCUSSION

To the best of author's knowledge, this is the first study to evaluate the knowledge and attitude of vitiligo and psoriasis among undergraduate medical students. Only one study documented that the most frequently endorsed myths among medical students about psoriasis were that the disease is not physically painful, is not a serious disease, does not negatively affect physical health, and can be cured [19]. The current study was necessary, as previous studies have reported poor public understanding and negative attitude, which affect the lives of many patients with vitiligo and psoriasis [22,23].

Remarkably, most of the students had sufficient knowledge about vitiligo and psoriasis. For example, 90.03% (316/351) and 82.05% (288/351) of students recognised that vitiligo and psoriasis, respectively, are non infectious diseases. More than two-thirds of respondents were aware that vitiligo and psoriasis are not contagious by touching or sharing things. Concurrent to the present study, the notion of contagiousness was maintained by less number (29.3%) of the participants in the study conducted in Saudi Arabia [24]. In another study people assumed psoriasis is contagious and is related to personal hygiene [25]. Good knowledge about the disease was observed to be associated with positive attitude in vitiligo and psoriasis. Inadequate knowledge concerning the nature of these diseases may result in discrimination of these patients [20,25].

More than two-thirds of respondents identified that vitiligo and psoriasis are not dangerous diseases or caused due to lack of hygiene. Likewise, >90% of students knew that vitiligo or psoriasis is different from leprosy. Similar to this study >50% of the participants were aware that vitiligo and psoriasis are different from leprosy and not caused due to lack of hygiene [26]. A 42.29% (173/351) of students were wrongly under the impression that vitiligo is a hereditary disease, whereas 36.47% (128/351) thought that psoriasis is a hereditary disease. In concurrent with this study, Alshammrie FF et al., found that the majority of surveyed participants considered vitiligo an inherited disease (59%) [18].

Only 55.84% (196/351) knew that psoriasis is not a disease that concerns only the skin. The 76.35% (268/351) and 79.49% (279/351) students classified vitiligo and psoriasis, respectively, as immune system diseases. Most of the students were aware that vitiligo and psoriasis result from an unknown cause. 76.92% (270/351) and 85.19% (299/351) students were cognizant that vitiligo and psoriasis, respectively, were more prevalent and exaggerated with exposure to psychological stress. In addition, because vitiligo and psoriasis are often instantly visible to others, patients become victims of social anxiety and emotional stress [25,27].

An 86.04% (302/351) of students were aware of available treatments for psoriasis, but only 71.51% (251/351) knew that there is a treatment for vitiligo. Lack of sufficient knowledge about the availability of numerous treatment options for vitiligo and psoriasis might result in patients adopting alternative medicine rather than allopathy. As seen in a study conducted by Bhalla M and Thami GP, most vitiligo patients preferred complementary and alternative systems of medicine [28]. A relatively higher proportion of subjects responded that vitiligo and psoriasis are not contagious by having a meal together or by air transmission and are not correlated with consumption of specific foods. In contrast, a study conducted in Saudi Arabia showed that the most popular misconception related to vitiligo was taking certain foods, such as milk or fish [29].

In the present study, 87.7% and 72.4% of students showed positive attitude towards vitiligo and psoriasis, respectively. 'Good knowledge' about vitiligo and psoriasis was directly proportional to 'positive attitude' towards these diseases. For example, they would sympathise with the patients, shake their hands, and eat or share food prepared by them. In contrast to this study, research conducted by Yong SS et al., reported that 42.9% of respondents had concerns

about shaking hands, 61.6% about sitting next to patients with psoriasis, and 36.6% about eating foods prepared by patients with psoriasis [30]. More than two-thirds of these medical students were ready to engage these patients as their employees. In addition, >90% of students said that they would not stare at these patients.

The 80.91% (284/351) and 70.37% (247/351) of students were ready to continue marital lives with vitiligo and psoriasis, respectively. The most awful response was that many respondents were not willing to marry individuals affected by vitiligo or psoriasis. This might be why it is difficult for these patients to initiate relationships [30]. Similar to this study, 69.14% of participants were unwilling to marry a vitiligo patient even when he or she was otherwise a suitable match [1]. More than half of the students were ready to ask vitiligo and psoriasis patients about their disease. Supporting this, it has been observed that vitiligo and psoriasis patients tend to develop negative feelings about their condition because of their past experiences [22].

Although according to the year of MBBS, there was no statistically significant difference about knowledge of vitiligo yet there was a statistically significant difference (p -value=0.002) about attitude. Alternatively, there was a statistically significant difference (p -value=0.002) regarding knowledge of psoriasis but there was no statistically significant difference in attitude, according to the year of MBBS. Education of every detailed aspect about vitiligo and psoriasis, especially among medical students, might change the attitude that could prevent the isolation of patients with these diseases. A study conducted in Central India found that being married or engaged in a healthcare-related occupation significantly predicts of good attitude levels [1].

Good knowledge about vitiligo was associated with positive attitude (90.1%). Likewise, good knowledge about psoriasis was associated with positive attitude (80.5%). Thus, in the present study, authors found that the medical student's knowledge about vitiligo and psoriasis had a significant relationship with their attitude, concurrent with previous studies [20-30].

Focusing on training undergraduate medical students about vitiligo and psoriasis will empower them to disperse correct information about these diseases. Hence, creating awareness in society about these diseases is an essential step to change the attitude towards these illnesses and reduce the emotional burden of these patients.

Limitation(s)

This research was a self-reported and a single-institutional study.

CONCLUSION(S)

The majority of the undergraduate medical students had 'good knowledge' and a 'positive attitude' towards vitiligo and psoriasis. Good knowledge was highly proportional to a positive attitude. Unfortunately, a considerably high number of participants reported that they would not marry a person with vitiligo or psoriasis. To reduce stigma, educational campaigns for the medical trainees are the need of the hour, which will lead to a positive attitude and further will decrease the discriminatory behaviour towards the patients and their relatives. Consequently, an increased self-confidence, social integration, and psychological well-being of the patients will result in better treatment outcomes.

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