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PUBLIC KNOWLEDGE AND ATTITUDES TOWARDS VITILIGO: A SURVEY IN BAGHDAD TEACHING HOSPITAL, AT 2023

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ABSTRACT

Background: Vitiligo is a frequent pigmentary condition. Vitiligo participants experienced significant psychological repercussions as well as social discrimination. The severity of the negative impact is connected to the attitude and knowledge of society. Aim of the Study to assess Knowledge gap and Attitude towards vitiligo among studied group and to assess the association between studied variables and level of knowledge and attitude towards vitiligo in studied group. **Method:** A descriptive cross-sectional study was conducted on 300 non-vitiligo participants of both sexes aged 18–65 who attended the outpatient clinic of Baghdad teaching hospital (all branches) from March 1 to July 1, 2023. Data was obtained using a self-administered vitiligo knowledge and attitude questionnaire. **Results:** This survey found 55.3% of participants knew about vitiligo. Good understanding of vitiligo was connected with 31–50-year-olds (56.6%), women (62.7%), employed people (80.7%), and fewer friends or family afflicted (73.5%). Additionally, 55.3% of individuals viewed vitiligo positively. Female participants (62.7%), urbanites (98.8%), and social media users (21.7%) had positive attitudes about vitiligo. **Conclusion:** Vitiligo knowledge was high among half the participants. Participants' age, gender, and employment affected vitiligo knowledge. Additionally, half of people were favourable about vitiligo. Positive attitudes regarding vitiligo were connected with gender, location, and source of knowledge.

KEYWORDS: Public, Knowledge, Attitudes, Vitiligo, Baghdad Teaching Hospital.

INTRODUCTION

Vitiligo is a chronic skin disorder characterized by epidermal depigmentation resulting from melanocyte cell death or dysfunction. Aside from instances of chemical exposure, trauma, or tumor, the precise etiology of vitiligo remains unclear. The condition has a global prevalence of 0.5% to 2% and often leads to aesthetic deformities, significantly impacting sufferers' quality of life.[1] Skin disorders, such as vitiligo, are often visibly apparent to others, leading to social and emotional consequences for those affected. Although vitiligo does not cause physical disability, it can induce considerable psychological distress. Many individuals with vitiligo experience stigma and develop negative feelings reinforced by their condition.[2] Vitiligo is surrounded by numerous myths and beliefs that vary across different regions of the world. Common misconceptions include the belief that vitiligo is contagious, linked to specific foods or drinks, caused by poor personal hygiene, incurable, hereditary, and can lead to skin cancer.[3] The persistence of these myths and misunderstandings can be attributed to factors such as lack of awareness about the disease, inadequate education, cultural beliefs, and societal misconceptions. These falsehoods can lead to negative attitudes towards patients. Compared to Western societies, Arabian communities harbor several misconceptions about vitiligo.[4] False collective beliefs become embedded in cultural identity and are used to justify social behavior. They significantly influence people's lives, including their approach to seeking medical care. Thus, recognizing myths and misunderstandings about vitiligo is crucial for improving care and health education for both sufferers and the general population.[5] While several studies have explored the impact of vitiligo on the quality of life (QOL) of sufferers, few have addressed the influence of public misconceptions on patient QOL. By identifying common misunderstandings about vitiligo, we can enhance the QOL of those affected and their families.[6] Aims of the study to assess knowledge gap and attitude

towards vitiligo among studied group and to assess the association between studied variables & level of knowledge and attitude towards vitiligo in studied group.

METHOD

This descriptive cross-sectional study was conducted over a four-month period from March 1 to July 30, 2023. Data collection occurred during daily working hours, with researchers working four hours per day, three days a week. A convenient sample of 300 individuals aged 18 to 65 years, who were not cases of vitiligo, was selected from outpatient clinics at Baghdad Teaching Hospital. Participants of both sexes aged 18 to 65 years, without vitiligo, were included. Data were collected using a self-administered structured questionnaire (Appendix I). The questionnaire, validated by community and family medicine specialists (Appendix II), was pre-tested in a pilot study. Written in English and translated to Arabic, it took 5-10 minutes to complete. Participants filled out the printed questionnaire, which was then collected for analysis. Participants provided information on age (categorized into 18-30, 31-50, 51-65 years), sex, marital status (single, married, divorced, widow), education level (primary, secondary, higher education), employment status (employed, unemployed), and residency (urban, rural). They were also asked if they had heard about vitiligo, their source of information (friends or family, social media, medical sources, internet), and whether a friend or family member was affected by vitiligo. A panel of 20 knowledge questions required yes, no, or don't know responses, while 11 attitude questions required answers of always, sometimes, or never. Correct knowledge responses were scored one point, incorrect and "don't know" responses scored zero. Total knowledge scores were categorized as good (equal to or greater than the median) or poor (less than the median). Attitude responses were scored with two points for positive, one for unsure, and zero for negative. Total attitude scores were categorized similarly.[5,6] A pilot study involving 10 patients at the selected hospital tested the questionnaire's clarity, applicability, and reliability, and estimated the time required for completion. Ethical approval was obtained from the Scientific Council of Arab Board of Family Medicine (Appendix III) and Baghdad Teaching Hospital (Appendix IV). Verbal consent was secured from each participant, ensuring confidentiality and no harm from participation. Data were analyzed using SPSS version 27. Descriptive statistics included frequency and percentage for non-numerical data. Analytical statistics used the Chi-square test to examine relationships between qualitative variables. A p-value of <0.05 was considered significant. A Knowledge, Attitude, and Practices (KAP) survey, using standardized questionnaires, provided access to both quantitative and qualitative information.[5]

RESULTS

Mean age of included participants was 35.54 ± 10.6 years. They were 42.7% males and 57.3% females. The majority of participants were married (59.3%), 30% were single, 6.7% divorced and 4% were widow. In addition, 71.3% of participants had high education, 74% were employed and 96.7% were living in urban areas. Most of patients (98.7%) heard previously about vitiligo, they know about vitiligo from friends or family (43.3%), medical source (28.7%), social media (16%) and internet (12%). The included participants reported friend or family member affected by vitiligo in 31.3% (Table 1).

Table (1): Distribution of participants according to socio-demographic characteristics.

Variables		Number (No. = 300)	Percentage %
Age years	18 – 30	118	39.3
	31 – 50	146	48.7
	51 _65	36	12
Sex	Male	128	42.7
	Female	172	57.3
Marital status	Married	178	59.3
	Single	90	30
	Divorced	20	6.7
	Widow	12	4
Education	Primary	16	5.3
	Secondary	70	23.3
	Higher education	214	71.3
Employment	Employed	222	74
	Unemployed	78	26
Residency	Urban	290	96.7
	Rural	10	3.3
Heard about vitiligo	Yes	296	98.7
	No	4	1.3
Source of information about vitiligo	Friends or family	130	43.3
	Social media	48	16
	Medical source	86	28.7

	Internet	36	12
Friends or families affected by vitiligo	Yes	94	31.3
	No	206	68.7

Regarding knowledge about vitiligo, higher percentage of participants agreed for the following: vitiligo is more prevalent and exaggerated with exposure to psychological stress, vitiligo is a disease of the immune system, vitiligo is caused by unknown etiology, vitiligo can affect all age groups, all people are susceptible to vitiligo, vitiligo is always associated with other immune diseases. Participants were mostly equally divided regarding if there is an effective treatment for vitiligo. In addition, higher percentage of participants denied the following: vitiligo is a hereditary disease, vitiligo is an infectious disease, vitiligo is associated with the habitual intake of certain foods, vitiligo is contagious by sharing things, vitiligo caused by lack of hygiene, vitiligo and leprosy are the same, vitiligo is contagious by touching, vitiligo is contagious by having a meal with patients, vitiligo is contagious by air transmission, vitiligo is a dangerous or fatal disease, vitiligo is diagnosed from birth, children born to a parent with the disease will suffer from the same disease. However, 50% of participants didn't know if vitiligo affects women more than men or not (Table 2).

Table (2): Distribution of studied participants according to answers on knowledge questions.

Questions	Answers (No. = 300)		
	Yes No. %	No No. %	Don't know No. %
Vitiligo is more prevalent and exaggerated with exposure to psychological stress	172(57.3)*	56 (18.7)	72 (24)
Vitiligo is a disease of the immune system	190 (63.3)*	24 (18.7)	86 (28.7)
Vitiligo caused by unknown etiology	144 (48)*	70 (23.3)	86 (28.7)
There is an effective treatment for vitiligo	102 (34)	98 (32.7)*	100 (33.3)
Vitiligo is a hereditary disease	94 (31.3)	144 (48)*	62 (20.7)
Vitiligo is an infectious disease	10 (3.3)	266(88.7)*	24 (8)
Vitiligo is associated with the habitual intake of certain foods	90 (30)	136(45.3)*	74 (24.7)
Vitiligo contagious by sharing things	16 (5.3)	230(76.7)*	54 (18)
Vitiligo caused by lack of hygiene	46 (15.3)	204 (68)*	50 (16.7)
Vitiligo and leprosy are the same	4 (1.3)	228 (76)*	68 (22.7)
Vitiligo contagious by touching	4 (1.3)	260(86.7)*	36 (12)
Vitiligo contagious by having a meal with patients	8 (2.7)	256(85.3)*	36 (12)
Vitiligo contagious by air transmission	0 (0)	278(92.7)*	22 (7.3)
Vitiligo is a dangerous or fatal disease	6 (2)	264 (88)*	30 (10)
Vitiligo affects women more than men	50 (16.7)*	100 (33.3)	150 (50)
Vitiligo diagnosed from birth	30 (10)	192 (64)*	78 (26)
Vitiligo can affect all age groups	254(84.7)*	18 (6)	28 (9.3)
All people are susceptible to vitiligo	178(59.3)*	58 (19.3)	64 (21.3)
Vitiligo is always associated with other immune diseases	130 (43.3)	54 (18)*	116 (38.7)
Children born to a parent with the disease will suffer from the same disease	60 (20)	122(40.7)*	118 (39.3)

*Correct answer.

Overall knowledge level

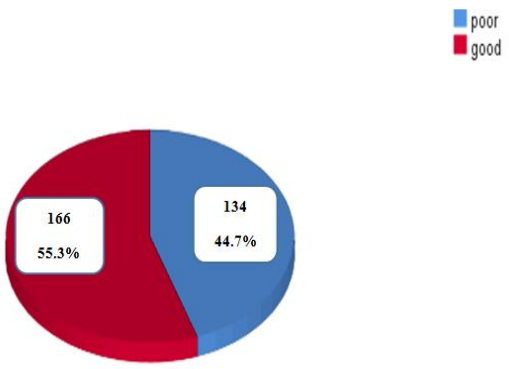

Figure (1): Distribution of studied participants according to knowledge towards vitiligo.

Concerning the attitude towards vitiligo patients, 70% of participants would always sympathize for a patient having vitiligo, 54% would never ask vitiligo patients about their disease, 58.7% would never stare at patients with vitiligo, 80% would never avoid shaking hands with a vitiligo patient, 50% would always eat food prepared by a vitiligo patient, 56% would always share food with vitiligo patient. Moreover, 76% of participants would always hire a vitiligo patient, 38% of participants would sometimes marry a vitiligo patient and 36.7% would never marry a vitiligo patient. Despite that, 60.7% of participants would always continue marital live with vitiligo patient and 62% of participants would never thought that separation is the expected outcome when marrying someone with vitiligo (Table 3).

Table 3: Distribution of studied participants according to answers on attitude questions.

Questions	Answers (no. = 300)		
	Always No. %	Sometimes No. %	Never No. %
I would sympathize for a patient having vitiligo	210 (70)*	72 (24)	18 (6)
I would ask vitiligo patients about their disease	42 (14)	96 (32)	162 (54)*
I stare at patients with vitiligo	20 (6.7)	104 (34.7)	176(58.7)*
I would avoid shaking hands with a vitiligo patient	14 (4.7)	46 (15.3)	240 (80)*
I would eat food prepared by a vitiligo patient	150 (50)*	86 (28.7)	64 (21.3)
I would share food with vitiligo patient	168 (56)*	98 (32.7)	34 (11.3)
As an employer, I would hire a vitiligo patient	228 (76)*	60 (20)	12 (4)
I would marry a vitiligo patient	76 (25.3)*	114 (38)	110 (36.7)
I would continuing marital live with vitiligo patient	182(60.7)*	68 (22.7)	50 (16.7)
Separation is the expected outcome when marrying someone with vitiligo	16 (5.3)	98 (32.7)	186 (62)*

*correct answers

Overall attitude level

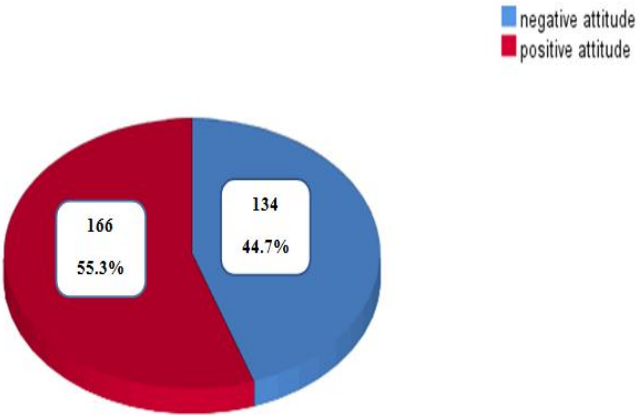

Figure (2): Distribution of studied participants according to attitude towards vitiligo.

Good knowledge about vitiligo was significantly more frequent in participants aged 31–50 years, moreover female married participants had significantly better knowledge. Employed participants had significantly better knowledge. Surprisingly, participants who had lower frequency of friends or families affected by vitiligo had better knowledge about vitiligo (Table 4).

Table (4): Association between socio-demographic characteristics and knowledge of vitiligo in studied participants.

Variables		Good knowledge (No. = 166) %	Poor knowledge (No.= 134) %	P value
Age years	18 – 30	56 (33.7)	62 (46.3)	0.009 (S)
	31 – 50	94 (56.6)	52 (38.8)	
	51_ 65	16 (9.6)	20 (14.9)	
Sex	Male	62 (37.3)	66 (49.3)	0.038 (S)
	Female	104 (62.7)	68 (50.7)	
Marital status	Married	100 (60.2)	78 (58.2)	0.040
	Single	42 (25.3)	48 (35.8)	

	Divorced	14 (8.4)	6 (4.5)	(S)
	Widow	10 (6.1)	2 (1.5)	
Education	Primary	10 (6)	6 (4.5)	0.832 (NS)
	Secondary	38 (22.9)	32 (23.9)	
	Higher education	118 (71.1)	96 (71.6)	
Employment	Employed	134 (80.7)	88 (65.7)	0.003 (S)
	Unemployed	32 (19.3)	46 (34.3)	
Residency	Urban	162 (97.6)	128 (95.5)	0.321 (NS)
	Rural	4 (2.4)	6 (4.5)	
Source of information about vitiligo	Friends or family	70 (42.2)	60 (44.8)	0.663 (NS)
	Social media	24 (14.5)	24 (17.9)	
	Medical source	52 (31.3)	34 (25.4)	
	Internet	20 (12)	16 (11.9)	
Friends or families affected by vitiligo	Yes	44 (26.5)	50 (37.3)	0.045 (S)
	No	122 (73.5)	84 (62.7)	

Using Chi-square test, p value < 0.05 is significant (S)

Positive attitude towards vitiligo was significantly more common in female participants, in participants living in urban areas and in participants who gain information about vitiligo from social media (Table 5).

Table (5): Association between socio-demographic characteristics and attitudes toward vitiligo in studied participants.

Variables		**Positive attitude (No. = 166) %**	**Negative attitude (No. = 134) %**	**P value**
Age years	18 – 30	70 (42.2)	48 (35.8)	0.498 (NS)
	31 – 50	76 (45.8)	70 (52.2)	
	51_ 65	20 (12)	16 (11.9)	
Sex	Male	62 (37.3)	66 (49.3)	0.038 (S)
	Female	104 (62.7)	68 (50.7)	
Marital status	Married	98 (59)	80 (59.7)	0.432 (NS)
	Single	52 (31.3)	38 (28.4)	
	Divorced	12 (7.2)	8 (6)	
	Widow	4 (2.4)	8 (6)	
Education	Primary	8 (4.8)	8 (6)	0.632 (NS)
	Secondary	42 (25.3)	28 (20.9)	
	Higher education	116 (69.9)	98 (73.1)	
Employment	Employed	120 (72.3)	102 (76.1)	0.452 (NS)
	Unemployed	46 (27.7)	32 (23.9)	
Residency	Urban	164 (98.8)	126 (94)	0.022 (S)
	Rural	2 (1.2)	8 (6)	
Source of information about vitiligo	Friends or family	68 (41)	62 (46.3)	0.029 (S)
	Social media	36 (21.7)	12 (9)	
	Medical source	44 (26.5)	42 (31.3)	
	Internet	18 (10.8)	18 (13.4)	
Friends or families affected by vitiligo	Yes	48 (28.9)	46 (34.3)	0.315 (NS)
	No	118 (71.1)	88 (65.7)	

Using Chi-square test, p value < 0.05 is significant (S), P value >0.05 is Non-Significant (NS)

DISCUSSION

Vitiligo, a common idiopathic acquired skin disorder, is characterized by the absence of normal melanin pigment and functional melanocytes in otherwise healthy-looking skin.[8] Its global prevalence ranges from 0.5% to 2%[9], frequently causing serious cosmetic deformities and significantly impacting patients' quality of life.[10] In this study, nearly half of the participants believed that vitiligo is more prevalent and exacerbated by psychological stress, a lower percentage than reported by Nayyar et al. in India (2022)[6] but higher than findings from Thailand by Juntongjin et al. (2018).[11] A majority agreed that vitiligo is an immune system disease, higher than reported by Algarni et al. in Saudi Arabia (2021)[5] but lower than Nayyar et al. in India (2022).[6] About half believed vitiligo has an unknown etiology, higher than results from Ethiopia by Tsadik et al. (2020).[12] and lower than Nayyar et al. in India (2022).[6] These discrepancies can be attributed to different social and cultural factors. Participants were divided on whether

effective treatment exists, similar to results in Saudi Arabia[5] but higher compared to Ethiopia.[12] Half denied that vitiligo is hereditary, akin to results in India[6] but higher than in Saudi Arabia[5], reflecting variations in education and cultural factors. The vast majority denied that vitiligo is infectious, matching findings in India.[6] Less than half denied an association with certain foods, with higher agreement reported in Saudi Arabia.[5] Most participants denied that vitiligo is contagious through sharing items, consistent with Ethiopian findings.[12] Additionally, most participants denied that vitiligo is caused by lack of hygiene or is similar to leprosy, and that it is contagious by touching, eating with patients, or through air transmission. These views were similar to those reported in India[6] and Ethiopia[12], indicating widespread general knowledge about vitiligo. Half were unsure if vitiligo affects women more, but the majority agreed it can affect all ages and that children of affected parents are not necessarily at risk. These findings suggest gaps in detailed knowledge about the disease's pathogenesis. Regarding attitudes, most participants would always sympathize with vitiligo patients, consistent with studies by Nayyar et al.[6] and Tsadik et al.[12] Nearly half would never inquire about the disease or stare at patients, a higher percentage than reported in India.[6] The majority would not avoid shaking hands with vitiligo patients, similar to results from Saudi Arabia[5] and India.[6] Half would always eat food prepared by vitiligo patients, akin to findings by El-Gilany et al. in Egypt.[13] Almost half would always share food with vitiligo patients, higher than reports from Saudi Arabia[5] and India.[6] Most participants would always hire a vitiligo patient, consistent with Egyptian results.[13] Regarding marriage, one third would sometimes marry a vitiligo patient, another third would never, and a lower percentage would always marry one. More than half would always continue marital life with a vitiligo patient and would not expect separation due to the disease, similar to studies in Egypt[13] and India.[6] These results highlight persistent stigma in various communities. Good knowledge about vitiligo was significantly more frequent among participants aged 31-50 years, agreeing with Tsadik et al. in Ethiopia[12], while Murshidi et al. in Jordan (2023)[7] found no age association. Algarni et al. in Saudi Arabia (2021)[5] reported better knowledge in those aged 50 or older. Female married participants had significantly better knowledge, similar to Algarni et al.[5] and Murshidi et al.[7] Employed participants also showed better knowledge, consistent with Algarni et al.[5] Unexpectedly, participants with fewer friends or family members affected by vitiligo had better knowledge, possibly due to social media being the main information source. No significant association was found between age and attitudes towards vitiligo. Positive attitudes were more common among female participants, similar to Algarni et al.[5] but contrary to Keraryi et al.[14] in Saudi Arabia, who found positive attitudes more common in males. No significant associations were found between educational level or employment and attitudes, consistent with Saudi findings.[14] Positive attitudes were more common among urban residents, agreeing with Murshidi et al.[7] Participants who sourced information from social media also showed more positive attitudes, unlike findings by Alshammrie et al.[15] in Saudi Arabia, where family-sourced information correlated with negative attitudes.

CONCLUSION

Half of participants had good knowledge of vitiligo. Good knowledge was associated with participants aged 31–50, female gender, employed participants, and lower frequency of friends or families affected by vitiligo. Education, residency, and source of information did not influence knowledge. Half of participants had a positive attitude towards vitiligo.

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