

Knowledge, Attitude, and Misconceptions of Public Regarding Vitiligo

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Abstract

Background: Previous studies of vitiligo have discussed attitudes of vitiligo patients toward their disease. However, few studies have addressed this issue from the public's point of view. **Objectives:** The main objective is to explore the knowledge, perceptions, misconceptions, and attitudes of the public toward vitiligo. **Subjects and Methods:** This cross-sectional survey was done using a self-constructed questionnaire. Participants were recruited from the students and employees of Hail University from April 1, 2015 to the end of November 2015. The data were collected and analyzed using Statistical Package for the Social Sciences (SPSS release 20.0). $P < 0.05$ was accepted for statistical significance. **Results:** The study included 1004 participants; 440 (43.8%) were male and 564 (56.2%) were female. 231 participants (23%) had no information about vitiligo ($P = 0.011$). 90.2% of the participants reported that available sources of information about the disease in general are not enough. The main source of information for males and females was the internet. Majority of surveyed participants believed that vitiligo is an inherited disease (59%). **Conclusion:** The misconceptions and negative attitudes about vitiligo among public are generally prevalent. Educating the public about vitiligo could lead to increased self-confidence, psychological well-being, and resulting in better adaptation of vitiligo patients in the society.

Keywords: Attitude, knowledge, vitiligo

INTRODUCTION

Vitiligo is a chronic skin condition characterized by loss of pigmentation of the epidermis, which occurs when melanocyte cells die or malfunction. Aside from cases of contact with certain chemicals, trauma, or neoplasm,^[1] the cause of vitiligo is unknown. The disease has a worldwide prevalence ranging from 0.5% to 2%^[2,3] and often induces cosmetic disfigurement in patients affecting their quality of life.^[4] Unlike most internal diseases, skin diseases such as vitiligo are often immediately visible to others and thus people suffering from dermatologic conditions may suffer social and emotional consequences.^[5] Although vitiligo does not directly cause physical impairment, it may cause much psychological stress.^[6] Many vitiligo patients feel distressed and stigmatized because of their condition,^[7] and they often develop negative feelings that are reinforced by their experiences.

Social acceptance of vitiligo patients is largely dependent on perceptions of this disease in a given population. Although previous studies have elicited the attitudes of vitiligo patients

toward their disease, few studies have addressed this issue from the public's perspective. Our study explores the knowledge, perceptions, misconceptions, and attitudes of the Saudi public toward vitiligo.

SUBJECTS AND METHODS

We performed a cross-sectional survey using a self-constructed questionnaire. Respondents were normal Saudi citizens including pregraduate students, graduate students, employees, and nonmedical staff working at Hail University. Data were collected from April 2015 to November 2015.

The questionnaire, which was written in Arabic, consisted of a brief introduction that included the goals of the survey. A total of 23 questions were divided into three categories, and a list of possible responses was provided. The first category

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of questions concerned personal information, including gender, age, educational level, average household monthly income, and occupation. In the second category, participants were asked about their knowledge of vitiligo and their main source of information about the disease. They were also asked about their personal views on the cause and nature of the disease, as well as available treatment and its perceived effectiveness. The third category elicited information about participants' attitudes toward vitiligo patients and included questions about whether they would marry a person affected by this disease.

Ethical approval was obtained from the Hail University Medical School Ethics Committee. The returned questionnaires were analyzed using the Statistical Program for Social Sciences (SPSS release 20.0, IBM Company, New York, USA) and $P < 0.05$ was accepted for statistical significance.

RESULTS

The study included 1004 participants, of which 440 (43.8%) were male and 564 (56.2%) were female. The mean age was 21.9 ± 3.5 years, and all respondents were residents of the Hail region. In total, 1400 questionnaires were distributed and 1004 were returned, resulting in a response rate of 71.7%.

A total of 773 participants (77%) reported having information about vitiligo, with only 231 participants (23%) confirming that they had never heard of vitiligo before participating in the study ($P = 0.011$). Participants' source of information about the disease was diverse: 195 out of the 773 participants who had heard of the disease (25.2%) stated that the source of their information was the Internet, and this was the most common source of information among both genders [Table 1]. The majority of participants (90.2%, 906) claimed that sources of information about vitiligo are insufficient.

When participants were asked about the seriousness of the disease, 722 (71.9%) reported that vitiligo is benign, whereas 90 participants (9%) viewed it to be serious. The remaining

participants (192, 19.1%) did not know about the disease's seriousness [Table 2].

When asked about treatment duration, 59.6% believed that vitiligo treatment takes years, while 5.2% believed only a few days are necessary. The estimated prevalence of vitiligo in the Hail region varied greatly of the surveyed participants, 35.6% reported that vitiligo and albinism are the same disease, regardless of the different names, whereas 27.5% believed that albinism is an inherited disease [Figure 1]. The majority of participants (59%, 592) believed that vitiligo is an inherited disease, although 2.1% (21) linked vitiligo with infection ($P = 0.026$) [Figure 2]. When asked about the risk factors of getting the disease, more than half of the participants (59.1%) agreed that genetic predisposition is the major risk, whereas 13.5% claimed that it is more related to stress.

More than half of the participants (62.2%) stated that they could identify a vitiligo patient due to the presence of completely white skin, whereas 29.8% reported the belief that only specific parts of the skin are white, while 2.5% associated vitiligo with redness of the skin. When we asked the participants in which age group the disease starts to appear, 30.6% responded that it appears during adolescence more so than in other age groups. A total of 80.5% of the participants (86% of the women and 73.4% of the men) reported that they would seek treatment if they were affected by the disease.

When participants were asked whether they would want other people to know that they had vitiligo, the majority (47%) answered that it would not matter if people knew or not, with a slight male predominance (55.7% of male respondents and 40.2% of female respondents), while 13% of the participants reported that they absolutely would not want other people to know about it ($P = 0.0001$). Around two-thirds (66.9%) reported no family history of the disease.

When further asked whether they would marry someone with vitiligo, the majority (73.8%) expressed that they would not.

Table 1: Availability of information about vitiligo among surveyed subjects

| Studied parameter | Total <i>n</i> (%) | Males <i>n</i> (%) | Females <i>n</i> (%) | <i>P</i> |
|--------------------------|-----------------------|-----------------------|-------------------------|----------|
| Have got any information | 1004 (100) | 440 (100) | 564 (100) | |
| Yes | 773 (77) | 322 (73.2) | 451 (80) | 0.011* |
| No | 231 (23) | 118 (26.8) | 113 (20) | |
| Source of information* | 773 (100) | 322 (100) | 451 (100) | |
| Physician | 174 (22.5) | 81 (25.2) | 93 (20.6) | 0.0001* |
| Newspapers | 55 (7.1) | 20 (6.2) | 35 (7.8) | |
| Internet | 195 (25.2) | 88 (27.3) | 107 (23.7) | |
| TV | 61 (7.9) | 28 (8.7) | 33 (7.3) | |
| Friends | 104 (13.6) | 54 (16.7) | 50 (11) | |
| School | 28 (3.6) | 11 (3.4) | 17 (3.8) | |
| Parents | 73 (9.4) | 15 (4.7) | 58 (12.9) | |
| Others | 83 (10.7) | 25 (7.8) | 58 (12.9) | |

*Significant $P < 0.05$. *Source of information is given only for the surveyed subjects who stated that they did have information about vitiligo (773/1004)

Table 2: Specific information about vitiligo in terms of nature of the disease, feasibility for treatment and its prevalence in the area

| Studied parameter | Total n (%) | Males n (%) | Females n (%) | P |
|---------------------------|----------------|----------------|------------------|---------|
| Disease seriousness | 1004 (100) | 440 (100) | 564 (100) | |
| Benign | 722 (71.9) | 327 (74.3) | 395 (70) | 0.288 |
| Serious | 90 (9.0) | 38 (8.7) | 52 (9.2) | |
| Don't know | 192 (19.1) | 75 (17) | 117 (20.8) | |
| Feasibility for treatment | | | | 0.0001* |
| Yes | 542 (54) | 207 (47) | 335 (59.4) | |
| No | 462 (46) | 233 (53) | 229 (40.6) | |
| Prevalence of the disease | | | | 0.0001* |
| <1% | 100 (10) | 60 (13.6) | 40 (7.1) | |
| 1-5% | 351 (35) | 183 (41.6) | 168 (29.8) | |
| 5-10% | 359 (35.7) | 141 (32) | 218 (38.6) | |
| 10-15% | 194 (19.3) | 56 (12.8) | 138 (24.5) | |

*Significant $P < 0.05$

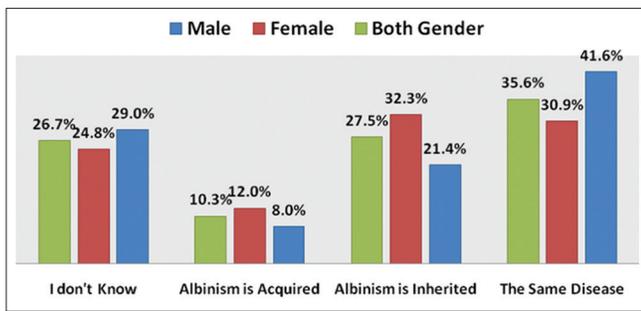


Figure 1: The difference between albinism and vitiligo according to the participants of the study

However, the presence of vitiligo patients in the respondent's family evoked a positive attitude toward vitiligo [Table 3], and thus patients with a positive family history of the condition were more willing to marry a vitiligo patient ($P = 0.0001$). This was in comparison with the participants who reported no family history of the disease, where the majority (79%) asserted that they would not accept a marriage proposal. The percentage of marriage acceptance was slightly more prevalent in female than male respondents. The level of education had no significant role in this decision. However, the nature of jobs affected this response, with high social class workers such as university staff and students less willing to marry a vitiligo patient than employees of a lower social class.

DISCUSSION

Vitiligo can occur at any age, although 50% of patients acquire it before the age of 20 years. Two of the major theories surrounding the pathogenesis of vitiligo are that it is an autoimmune disorder or that it is an example of autocytoxicity.^[8,9] There are multiple treatment options for patients suffering from vitiligo, although they are not generally accepted as effective. Further, the relapse rate for all forms of treatment is considerably high.^[3,8,10] A recent study by Alghamdi *et al.* revealed that misconceptions and

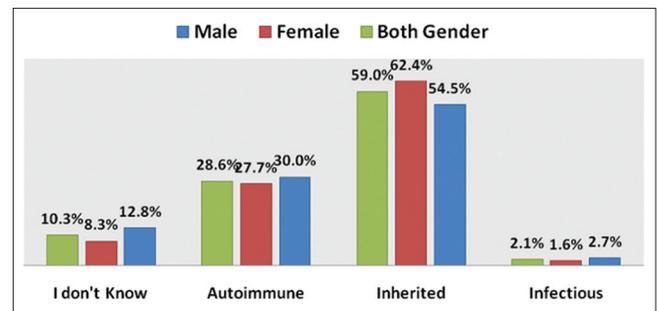


Figure 2: Causes of vitiligo according to the participants of the study

negative attitudes toward vitiligo among the general public are prevalent.^[11] Another study by Thompson *et al.* analyzed British vitiligo patients and discovered that they suffer from a tendency toward avoidance and concealment.^[12] This seemed to be caused by cultural values related to appearance and status as well as myths surrounding the cause of the condition. The perception of a population toward vitiligo differs in terms of disease seriousness, risk of infection, availability of treatment, and duration of therapy. Our surveyed participants were a relatively educated population, and 23% of them expressed a lack of information about the disease, which could be a reason why inaccurate information is often disseminated within the community. The source of information in this study is relatively similar to the study by Al Robaee, who explored the knowledge of and attitude toward vitiligo in the Al-Qassim region of Saudi Arabia.^[13] This highlights the importance of medical websites and health professionals, who need to ensure that they are transferring the right information to the population.

One of the questions posed surrounded the difference between vitiligo and albinism, and the results were interesting. More than one-third of the participants (35.6%) believed that vitiligo and albinism are the same disease, regardless of the different names ($P < 0.05$). This result could be explained by the erroneous belief among the majority of the participants (59%) that vitiligo is an inherited disease.

Table 3: Attitude of surveyed subjects regarding their acceptance of affected patients of opposite sex in marriage

| | Total n (%) | Yes n (%) | No n (%) | P |
|----------------|----------------|--------------|-------------|---------|
| Gender | | | | |
| Males | 440 (100%) | 111 (25.2) | 329 (74.8) | 0.538 |
| Females | 564 (100%) | 152 (27) | 412 (73) | |
| Family history | | | | 0.0001* |
| Positive | 332 (100%) | 122 (36.7) | 210 (63.3) | |
| Negative | 672 (100%) | 141 (21) | 531 (79) | |
| Total | 1004 (100%) | 263 (26.2) | 741 (73.8) | |

*Significant $P < 0.05$

Vitiligo patients have difficulties in interacting with society because of the prevalence of misconceptions surrounding the disease in the wider community, and this may be an obstacle on the path toward marriage. Approximately 73.8% of the surveyed patients stated that they would not accept a marriage proposal from a vitiligo patient. Even married individuals, who develop vitiligo after marriage, may face marital problems and perhaps even divorce. Our study revealed that patients with a positive family history of vitiligo were more accepting of the idea of marrying an affected person, which could be related to having more information about the disease. In comparison with Al Robaee's study,^[13] we found a slight gender difference between men and women in terms of marrying a person with vitiligo.

We hope that this study will pave the way for many follow-up studies of this important topic. Future research should extend its participant group from the university context to the whole population. Further, it is important to emphasize to the public the difference between vitiligo and albinism to correct the erroneous perception that the two conditions are the same. It is necessary to clarify that vitiligo is an acquired idiopathic disease, whereas albinism is an autosomal recessive inherited disease, and that the two have distinct pathogeneses. Mass public education should be organized to clarify the misconceptions revealed in our study, as correcting these misunderstandings may help increase the self-confidence of

patients, helping them experience good adaptation in society and overcome barriers to a healthy lifestyle. Finally, we suggest using these data to disseminate information about vitiligo through TV programs, educational posters, lectures, and local newspapers, as these sources will serve to change public perception, including the views of our university participants, on the topic of vitiligo.

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Conflicts of interest

There are no conflicts of interest.

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