

Comparison of Perceived Stigmatization, Social Avoidance and Self-Concept among Male and Female Vitiligo Patients

Komal Naz¹, Nazia Nawaz²

ABSTRACT

Vitiligo is a non-infectious skin disease characterized by white skin patches that are distinctive in size and shape caused by the loss of pigment cells in the skin. The disease is equally prevalent in both genders regardless of age, race, and ethnic groups. The disease does not cause any disability and pain on the part of the individual but gives rise to many psychological concerns like depression, anxiety, social avoidance, perceived stigmatization, low self-concept, and low self-esteem. The objective of the study was to assess the impact of perceived stigmatization and social avoidance on vitiligo patients and to analyze the stigmatization effect on self-concept. The effect of exposed and un-exposed patches of skin on self-concept was also an area of concern. A sample of N=100 (n=50 male and n=50 female) between ages 15 to 50 years suffering from vitiligo were selected from dermatology departments of different hospitals and the general population by using a purposive sampling technique. Perceived stigmatization scale, Social avoidance and distress scale, and Robson self-concept scales were administered to the selected sample. The results indicated that there exist no significant difference in perceived stigmatization and social avoidance among male and female vitiligo patients. The predictor stigmatization .091 is insignificant and has no significant effect on self-concept $r^2=1.44$. Also, there is no significant difference between the self-concept of individuals with vitiligo on exposed (M= 22.44 and SD = 6.25) and un-exposed body parts (M= 24.44 and SD= 5.29). It is concluded from the current study that both genders are the victim of stigmatization and social avoidance due to their disfigured appearance and the condition leaves a devastating impact on self-concept no matter whether the person has patches on exposed or un-exposed parts of the body.

Keywords: *Perceived Stigmatization, Social avoidance, self-concept, and vitiligo*

INTRODUCTION

There is no doubt that skin is the most prominent part that determines one's looks and appearance. Appearance has cultural importance as it influences other's perceptions regarding oneself. Any visible skin condition that causes a disfigured appearance results in a loss of

¹ BS Student, Department of Psychology, Shaheed Banzir Bhutto Women University, Peshawar.

² Lecturer, Department of Psychology, Shaheed Banzir Bhutto Women University, Peshawar.

Corresponding Author's Email: nazianawaz17@gmail.com

privileges, opportunities, and social mobility (Grimes and Miller, 2018). Skin diseases like vitiligo are visible to others and thus have many psychological impacts on the sufferer (Ashwanikumar, et al, 2018).

Vitiligo is a rare skin condition characterized by white skin patches/lesions that are distinctive in size and shape which is the resultant factor of loss of pigment cells in the skin. It is more likely to occur on exposed body parts i.e. face, hands, and feet, and gradually spread to other body parts. The etiology is unknown. Other than itching no other symptoms are reported by the patients but the individual appears to be distressful about its spreading to other parts of the body (Krüger and Schallreuter, 2013). The disease affects both genders and is common for all races, ages, and ethnic groups.

There are two types of vitiligo i.e. segmental and non-segmental vitiligo (Bergqvista and Ezzedinea, 2020). Non-segmental vitiligo has consistent distribution and is the resultant factor of autoimmune disease. Segmental vitiligo has unusual distribution, is not correlated to autoimmune disease, and has sudden equalization. Segmental vitiligo is more likely to occur at an early age. Non-segmental vitiligo is categorized into generalized, acrofacial, universal, mucosal, and mixed vitiligo. Punctata and hypochromic vitiligo is a rare form of vitiligo that also falls in this category (Bergqvista and Ezzedinea, 2020).

Generalized vitiligo is when the lesions spread out to the various parts of the body i.e. face, trunk, etc. Acrofacial vitiligo is more likely to occur on the face, head, hands, feet, distal fingers, and orifices. Acrofacial later converts into generalized vitiligo. Universal vitiligo is found among adults in which the hair of the affected site gets white. Progression of generalized vitiligo when came to an end, it converts into universal vitiligo which is characterized by a complete depigmentation of skin and hair. Mucosal vitiligo involves oral and genital mucosae. Mixed vitiligo includes both segmental and non-segmental vitiligo. In between 6 to more than 24 months, segmental vitiligo followed by non-segmental. Vitiligo punctata a numerous, tiny, sharp macules that can be separated from one another. This is a very rare type of vitiligo. A hypochromic type of vitiligo is found among people with dark complexion. It contains both hypopigmented macules and depigmented patches. This type of vitiligo is also very rare (Iannella, et al, 2016).

Stigmatization is defined as possessing a characteristic, or trait that stands out as atypical and devaluated by others which in turn brings disapproval from the external environment (Halioua and Cribier, 2016).

Stigmatization results from a disfigured appearance caused by vitiligo. Many societies hold the belief that vitiligo is a contagious skin disease. Indeed, for many patients, the attitudes and reactions of others can have a significant impact on their overall well-being. While the disease itself is less likely to cause any discomfort, the emotional toll of negative attitudes and reactions from others can exacerbate their distress. (Ashwanikumar, et al, 2018). They perceive themselves as having a disfigured appearance and distinctive look which make them highly conscious and vigilant about the opinions of others. Such thinking patterns build up when a person experiences rejection from the external environment. Being stared at public spots frequently asked questions about the disease, negative and rude comments from the observers, discriminative attitude at a job

or work-related activities, and being reluctant to make physical contact and using items of the patients come under the category of stigmatization (Krüger and Schallreuter, 2015). Such individual tends to anticipate the future probability of such events and fall into the stigmatized category. Moreover, certain behaviors and events that are neutral are perceived as stigmatized as they induce feelings of shame, guilt, and embarrassment and they attempt to hide their lesions from others.

Stigmatized individuals often face discrimination. They tend to anticipate a discriminatory interaction with others (Dimitrov and Szepietowski, 2017). Stigmatization, as a result, causes social and psychological stress that varies from person to person and poorly affects self-esteem, particularly of those with a dark complexion and lesions on exposed body parts (Nazar, et al, 2021). Stigmatization often affects people to the extent that it becomes difficult for them to remain employed. Visibility of the lesions causes suicidal ideation which makes the majority commit suicide. Stigmatization proves to be an obstacle in normal activities and daily functioning because of atypical appearance.

Apart from causing physical discomfort, it is important to shed some light on the cognitive, emotional, and behavioral phenomena of vitiligo patients. Cognitive-schematic diagram regarding self-determines how a person interprets their selves and others' reactions. An individual who is conscious about themselves believes that people in social settings are observing them. They will relate the behaviors of others to themselves without any logical grounds. Hiding skin patches/lesions with the help of cosmetic application is a behavioral phenomenon often observed in patients with the disease which is the product of cognitive components regarding self. Avoiding social situations, lack of participation in social settings, and reluctance to form relationships are the social components of the disease whereas feeling dejected and anxious, fearful, embarrassed, and aggressive is the emotional component of the disease (Longhurst, 2019).

Stigmatization and discrimination sometimes emerge as a confusing term and are characterized by threats to personal and civil rights. There are three types of health-related stigma i.e. experienced stigma, perceived stigma, and internalized stigma (Nazar, et al, 2021). Many patients reported perceived or felt stigma which is when there is no actual event of stigmatization taking place but the individual anticipates the discriminative attitude and rejection (Beugen, et al., 2017). Experienced or real stigma is when an actual discriminative attitude or event happens to the person. Events of experienced stigma have been observed in the form of rude remarks, biased attitudes, staring, bullying, etc. (Nazar, et al, 2021). Lesions on exposed body parts put an individual at higher risk of discrimination (Chernyshov, 2016).

Social avoidance can be defined as staying away from someone, talking to or interacting with someone, and escaping from social situations for any reason. White patchy skin creates feelings of shame, embarrassment, low confidence, anxiety, depression, and poor self-esteem making a person avoid social situations as well activities that draw them to uncover their body and make their skin lesions visible to others (Ashwanikumar, et al, 2018).

Social avoidance results when it becomes challenging or impossible for a person to cover or hide his patches of depigmented skin, such as those caused by vitiligo on exposed body parts.

Patches of depigmented skin on exposed body parts, such as the face, hands, or arms, are more noticeable and draw attention. This heightened visibility can make individuals feel more self-conscious and increase their discomfort in social situations. This can cause relational instability with fellows, acquaints, peers, and friends. Indeed, many individuals with vitiligo are acutely conscious of how others may react to their condition in social settings (Frisoli, et al, 2020; Bidaki, et al, 2018). It has also been noticed that some patients appear to be more worried and concerned about the minor lesions regardless they are on exposed or unexposed areas whereas others show no or very little discomfort despite major clinical severity even if the lesions are on exposed body parts.

Porter in 1970 initially talked about the psychosocial aspect of vitiligo and considered it important to bring under the attention of dermatologists (Ongenaes et al, 2006). The sense of being different from the perceived normal population and being stigmatized affects an individual's social behavior. As skin holds significant social importance, the stigmatization is the same or sometimes even worsened just like any other physical condition which leads to social avoidance. Many patients reported that they are worried most of the time of the day and have a constant anxious state due to vitiligo.

According to the findings of a study, 66.7% avoid swimming and bathing, 14.6% have anxiety about changing dress in changing rooms, and 6.3% have anxiety about shaking hands during greetings and sports. It makes them unable to dress themselves of their own choice (Garge and Sarkar, 2014). Camouflage and sitting posture would be in a way that can hide patches. Such patients tend to avoid activities that tend to draw other's attention. They may feel a lack of control over how others perceive them. This loss of control can amplify feelings of vulnerability and lead to avoidance behaviors (Shah, et al, 2014). Meeting new people and taking initiative in friendship is a challenge for them. The disfigurement appears to be an obstacle to forming and maintaining relationships (Ashwanikumar, et al, 2018). As vitiligo patients experience rude remarks, teasing behavior, and other unhealthy reactions, such phenomenon leads to preoccupation and future anticipation of such behaviors which results in self-isolation and limited social contact (Sawant, et al, 2019)

Schmid-Ott et al in 2007 identified avoidant coping styles among vitiligo patients. These coping styles turned out very helpful for the patients. They tend to dress themselves in a way that makes their patches invisible to the external audience and minimizes the threat of social rejection and stigmatization. Such dressing makes them unable to perform activities they usually tend to avoid due to their visible skin patches. Many of them use a large number of cosmetic products (Garge and Sarkar, 2014). It is to manage the lesions with the skin color to give it a normal appearance and to minimize the risk of rejection and stigmatization (Rao, et al, 2020). These strategies prove to be effective and have a transient good impact on patient's well-being. The findings from the study conducted in India highlight the multifaceted impact of vitiligo on patients' lives, extending beyond physical symptoms. They were with many diseases related concerns as well as concerned about the changes in disease over time and mark impact on the social, occupational, and marital life of the patients.

Self-concept refers to self-assessment and self-perception. It refers to the way a person thinks about him/herself. The knowledge and awareness about self is called self-concept (Bharathi, et al, 2016).

It is defined as the individual's concept regarding self, which emerged from the behavior and attitude of others towards the individual's outer self. A supposition regarding self-concept is that the individual's perception regarding self is built up in the early ages of his life and remains stable throughout the life span. A child's perception regarding self is influenced by the perception of significant others in his surroundings and becomes a permanent and firm sense of self. Self-concept is not instinctively present in a human but is shaped by the interaction with the environment (Bharathi, et al, 2016). Individual regardless of gender appears to be concerned about captivation. He strives for what appears to be an appeal to others and also for his value as a human. Sometimes consciously or unconsciously, they tend to compare themselves with others in their surroundings or on social media to evaluate their worth. Any apparent and observable disfigurement like vitiligo will worsen the self-concept by destroying self-esteem and body image.

Self-concept and body image are correlated. Vitiligo sufferers know that their appearance is being altered by the disease and it will make others behave differently. Such patients prioritize maintaining optimal self-esteem on physical attractiveness. Perception regarding one's body image is altered due to the changes caused by cutaneous disease (Ashwinkumar, et al, 2018).

By working on body image and making the patient well-adjusted to the disfigured appearance, the self-concept of the patient can be improved. Another component i.e. self-esteem can also be subjected to address to improve self-concept and make adjustments with the disfigurement. Psychologically well-adjusted people have a healthy self-concept. The cognitive schematic phenomena regarding self, gain special attention in adjusting with vitiligo. Self-concept is an important social factor, largely based on how others react towards the person. Vitiligo affects an individual's judgment about body image, and self-esteem and affects social and psychological aspects of life. This poor body image further gives rise to psychiatric comorbidities (Ashwinkumar, et al, 2018).

Larsen and Lubkin (2005) defined body image as the picture/ image/perception that an individual has in his mind regarding his body that is based on his or her evaluation of his body. Body image has two major components i.e. body evaluation and body investment. Body evaluation refers to dissatisfaction whereas body investment is the degree to which one pays attention to his appearance, thinking process, and acts. It also determines how much a person depends on their appearance. Another important component associated with body image is self-esteem thus body image is the most central component of self and mental and social environment and that is why it is the baseline of self-concept and self-esteem (Nazar et al, 2021).

Self-esteem highly relies on one's feelings instead of obvious facts. That is why an individual's perception of self is based on other views regarding them (Beugen et al., 2017). Self-esteem is defined as the degree to which we give respect to ourselves and the degree to which we value or approve our self. It involves self-evaluation and our positive or negative opinions about ourselves. It is categorized as high and low self-esteem. High self-esteem is characterized by

having a positive and healthy judgment, perception, and evaluation of self. It further gives rise to an optimal and balanced level of confidence, positivity, no desire for approval from others, and self-acceptance. Whereas low self-esteem is characterized by negative and unhealthy judgment, perception, and evaluation of self (Gül, 2017). This pathetic sense of self leads to a low level of confidence, an intense desire for approval from others, to be like someone else, and negativity.

Self-esteem shapes up in the early years of life. Parents are the major figure in shaping self-esteem by inducing a sense of admiration, self-worth, and self-acceptance. Certain environmental factors are also identified as the major determinants of self-esteem like, family matters, certain situational factors, and the surrounding people. Genetic composition is another determinant of self-esteem. Vitiligo is a spot on the skin but has a devastating negative impact on self-esteem which ultimately ruins an individual's body image and overall, a concept regarding self. Low self-esteem is the major issue people with vitiligo face in the early years of the onset of the disease and finds it challenging to maintain a healthy level of self-esteem. Low self-esteem manifests itself in the form of self-criticism, self-blaming, and self-doubting. Individuals become pessimistic and focus on negative instead of positive aspects of their personality which as a result cause guilt anger and frustration (Mohmoud et al, 2023).

Objectives of the study

1. To compare the level of perceived stigmatization and social avoidance among male and female vitiligo patients.
2. To analyze the impact of perceived stigmatization on self-concept.
3. To evaluate the impact of exposed and un-exposed skin patches on self-concept.

Hypotheses

1. The scores on the perceived stigmatization scale will be higher in female than male Vitiligo patients.
2. The scores on the social avoidance scale will be higher in female than male Vitiligo patients.
3. Perceived stigmatization will lead to low self-concept.
4. An individual who has patches on exposed body parts will have a low self-concept as compared to those who have on unexposed body parts.

METHODOLOGY

A total sample of N=100 (n=50 male and n=50 female) age ranges from 15 to 50 years suffering from vitiligo were selected through purposive sampling technique from dermatology departments of different hospitals and the general population.

Inclusion criteria

1. Diagnosed vitiligo patients' age ranges between 15-50 years.

Exclusion criteria:

1. Patients with other skin conditions were excluded.
2. Vitiligo patients below 15 and above 50 years.

Demographic Sheet

Demographic sheet comprised of the name of the patient, education of the patient, no. of years caught by disease, location/site of lesions i.e. exposed body parts i.e. face, hands, feet or unexposed body parts i.e trunk, legs, etc.

Instruments

The below-mentioned instruments were used in the research.

Perceived Stigmatization Questionnaire (PSQ)

Lawrence et al found a perceived stigmatization scale in 2006. The Perceived Stigmatization Questionnaire is based on two appendices i.e. Perceived Stigmatization (Appendix A) and Social Comfort (Appendix B). Perceived Stigmatization Questionnaire is a self-report inventory that helps to identify stigmatized social behavior.

The perceived stigmatization questionnaire (PSQ) was intended to collect data based on the study's objectives. It consists of 21 items that will identify stigmatized social behaviors (Lawrence et al., 2006). The PSQ has three sub-domains i.e. absence of friendly behavior, confused and staring behavior, and hostile behavior. These three domains show the individual's social acceptance (reverse coded), social discomfort, and social rejection.

It is a 5-point Likert scale (1; never, 2; almost never, 3; sometimes, 4; often, 5; always) on which the respondent has to respond to tell the frequency of experiencing the behavior. Reverse code questions in the scale are 1, 5, 7, 9, 12, 15, 17 and 20. A respondent who scores high on the scale indicates that he is more likely to experience stigmatized behavior. The scale's validity and reliability are identified to be good ranging up to 0.88.

The Social Comfort Questionnaire consists of 8 items. It helps to identify social comfort (Lawrence et al., 2006). The SCQ has two distinctive aspects: an individual insight into social seclusion and the neglect of solitude reaction. The respondent has to tell about the extent he perceives the mentioned statement." It is a 5-point Likert scale (1; never, 2; almost never, 3; sometimes, 4; often, 5; always) on which the respondent has to respond. The reverse code questions in the sale are 2, 3, and 7. If a respondent gets a high score on the scale, it indicates a high level of social comfort.

Social avoidance and distress scale

Watson in collaboration with Friend founded the scale in 1969. The social avoidance and distress scale is intended to measure social anxiety negative evaluation concerns and rejection in

social settings. The social avoidance and distress scale was used to collect data based on the study's objective.

The scale consists of 28 items. The scale has further two sub-domains. One is social avoidance and the other is social distress. The respondent has to mark the statement as true/false. If the statement is mostly true for the respondent then he has to mark it true. If the statement is mostly false for the respondent then he has to mark it as false. Scores are arranged into high, average, and low. 0 or 1 is the specification of a low level of Social Avoidance, 2 to 11 is the specification of an average level of Social Avoidance, and 12 and up is the specification of a high level of Social Avoidance. The cut-off score identified for the scale is equal to or greater than 12. Scoring 12 or greater than 12 is the indication that the person is withdrawing from social settings. The scale's validity and reliability are identified to be good. The estimated internal consistency is 0.94 and the estimated test-re-test reliability is 0.68.

Robson self-concept questionnaire

The scale was founded by Robson in 1989. It is a paper-pencil self-report inventory designed to assess the individual's judgment about him/herself. It is also a 5-point Likert scale (1; completely disagree, 2; Disagree, 3; Agree, 4; completely agree). The scale contains 30 items. A high score on the scale is an indication of a positive self-concept. The scale indicates a good reliability range of 0.89 and a good validity range of 0.70

RESULTS

Table 1

Mean scores, standard deviation, and t-value of males and females on perceived stigmatization and social avoidance and distress scale (N= 100).

Scales	Males(n=50)		Females(n=50)		<i>t(df)</i>	<i>P</i>	95%CI		Cohen's <i>D</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Perceived stigmatization	56.02	8.59	58.88	9.69	-1.56(98)	0.122	-6.49	.778	0.132
Social avoidance and distress	12.66	5.36	13.44	7.11	-.619(98)	.537	-3.28	1.72	.123

There is no significant difference in perceived stigmatization and social avoidance among male and female vitiligo patients.

Table 2

Regression analysis between perceived stigmatization and self-concept (N=100).

Model	Beta	SE	LL	UL
Constant	18.195	3.68	10.87	25.51
Stigmatization	.091	.063	-.035	.217
R2	.144			

The predictor perceived stigmatization is insignificant and has no significant effect on an individual’s self-concept.

Table 3:

Mean scores, standard deviation, and t-value of self-concept of individuals on exposed and un-exposed body parts (N= 100).

Variables	Exposed body parts		Un-exposed body parts		<i>t(df)</i>	<i>P</i>	95%CI		Cohen’s <i>D</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Self-concept	22.44	6.25	24.44	5.29	-1.72(98)	0.088	-4.30	0.30	0.345

There is no significant difference between the self-concept of individuals who have vitiligo on exposed and un-exposed body parts.

DISCUSSION

Vitiligo is a non-contagious skin disease. There are two types of vitiligo i.e. segmental and non-segmental. Segmental type of vitiligo was characterized by inconsistent division and was not caused by autoimmune disease whereas non-segmental was characterized by consistent division and resulted from autoimmune disease.

Table 1 indicates the mean value of males = 56.02 and standard deviation =8.59 at 0.05 C. I and mean value of females = 58.88 and standard deviation = 9.69 at 0.05 C. The perceived stigmatization scale shows no significant difference in perceived stigmatization among male and female vitiligo patients. So based on the results of our current study, we accepted our null hypothesis and rejected the alternative hypothesis. A study conducted in 2015 showed that both genders are equally subjected to perceived stigmatization (Krüger and Schallreuter, 2015) which was also obvious from the current study.

The mean value of males =12.66 and standard deviation = 5.36 at 0.05 C.I and the mean value of females = 13.44 and standard deviation = 7.11 at 0.05 C. I on the social avoidance and distress scale show no significant difference in social avoidance among male and female vitiligo patients. So based on the results of our current study, we accepted our null hypothesis and rejected the alternative hypothesis. A very limited no of studies found on social avoidance indicated that social avoidance is more likely to occur in females than males because of beauty standards associated with gender. Another phenomenon that made them avoid social situations was being securitized by others (Sawant et al, 2019). But the current study showed no difference in the context of social avoidance in terms of gender as a study conducted in 1999 indicated that people with vitiligo even though they got patches on exposed or unexposed body parts tend to avoid social situations to preserve positive judgment by others (Kent, 1990).

Table 2 indicated the perceived stigmatization score = .091 and R²= 1.44 which shows that the predictor perceived stigmatization was insignificant and has no significant effect on individual's self-concept. So on behalf of the results we accepted the null hypothesis and rejected the alternative hypothesis. Self-esteem an important aspect of self-concept identified to be poor among vitiligo patients which was obvious from different studies. This causes feelings of worthless and a sense of inadequacy. Feeling less physically attractive creates a sense of being rejected from the social circle. Such thought was supported by the attitude that society holds towards physically attractive and healthy people (Mohammad et al, 2021). According to the current study, the self-concept of teenagers and individuals with early adulthood identified are highly at risk the vitiligo comparatively old age group and individuals come in the category of late adulthood.

Table 3 indicated the mean scores of exposed body parts = 22.44 and standard deviation = 6.25 and mean scores of un-exposed body parts = 24.44 and standard deviation = 5.209 at 0.05 C. I showed no significant difference between the self-concept of individuals who have vitiligo on exposed and un-exposed body parts. So, we will accept our null hypothesis and reject the alternative hypothesis. A study conducted in 2021, indicated that mental health identified to be poor among those who got vitiligo lesions on exposed body parts which were manifested in the form of poor self-confidence, self-concept, and social anxiety (Mohammad et al., 2021) but the current study indicate that whether the patient has lesions on exposed or unexposed body parts both equally affect the self-concept of the patient. The majority of the patients reported discomfort during summer as they had to wear light dresses according to the weather. This sometimes revealed certain parts of the body and made the lesions visible to others which is distressing for them (Silvan, 2004).

CONCLUSION

Vitiligo is a chronic skin disease. Once it's afflicted a person, it drags a person into several psychological problems by poorly affecting their self-esteem, self-concept, and quality of life.

Table 1 indicates the mean value of males = 56.02 and standard deviation =8.59 at 0.05 C. I and mean value of females = 58.88 and standard deviation = 9.69 at 0.05 C. The perceived stigmatization scale shows no significant difference in perceived stigmatization among male and

female vitiligo patients. So, based on the results of our current study, we concluded that both genders are the victim of perceived stigmatization due to their dermatological condition. Different studies use different instruments to measure stigmatization among patients suffering from dermatological conditions to modify their behavior and provide them with therapeutic interventions for better adjustment to the disease.

The mean value of males =12.66 and standard deviation = 5.36 at 0.05 C. I and the mean value of females = 13.44 and standard deviation = 7.11 at 0.05 C. I on the social avoidance and distress scale show no significant difference in social avoidance among male and female vitiligo patients. So, based on the results of our current study, we concluded that social avoidance that stems from stigmatization is also equally prevailing in both genders. Visibility of the skin lesions and inability to hide them is another dilemma that makes them avoid social situations which was supported by the patient's family as well.

Table 2 indicated the perceived stigmatization score = .091 and R²= 1.44 which shows that the predictor perceived stigmatization was insignificant and has no significant effect on individual's self-concept. So, on behalf of the results we concluded that it is not the predictor stigmatization that weakens the individual's self-concept but it's the disease itself that marks a poor impact on self-concept.

Table 3 indicated the mean scores of exposed body parts = 22.44 and standard deviation = 6.25 and mean scores of un-exposed body parts = 24.44 and standard deviation = 5.209 at 0.05 C. I showed no significant difference between the self-concept of individuals who have vitiligo on exposed and un-exposed body parts. So based on these results we concluded that self-concept is poorly affected no matter whether the individual got patches on exposed or un-exposed body parts. Having vitiligo lesions on sun-exposed body parts makes them highly concerned and worried about its being spread to other parts of the body.

Limitations and Suggestions

- i. The sample size was small in the current study. For future research, a larger number of samples is suggested.
- ii. A limited number of hospitals were approached for data collection. For future research, more dermatological hospitals should be consulted to have a larger sample for the same problem.

Implications

- i. It is important to arrange seminars and conferences to spread awareness regarding the non-contagious nature of vitiligo, so the productivity of the individuals can be retained. This will enlighten the minds of society, educate them regarding its non-infectious nature, and will ultimately reduce a discriminatory attitude toward job-related activities.

- ii. Psychotherapists should take part in these seminars and conferences to educate about the psychological impacts of the disease. By developing appropriate therapeutic interventions according to the patient's psychological problems, the psychological issues associated with skin conditions can be addressed.
- iii. As the condition is not curable. By overcoming the dilemmas faced in current research, future research in this area might be able to find a curative treatment for the disease by making an in-depth analysis.

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