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Sociodemographic and Clinical Factors of Perceived Quality of Life in Individuals with Vitiligo

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Vitiligo is a condition where loss of colored cells develop on the skin and cause white lesions (Morrone, 2004). The present study was designed to examine sociodemographic and clinical factors of perceived quality of life (QoL) in individuals with Vitiligo. A cross-sectional correlational research design with purposive sampling strategy was used. The sample consisted of people with Vitiligo (N=120) from skin department of different government and private hospitals in Lahore. Self-constructed demographic information sheet, clinical information sheet and Dermatology Life Quality Index (Finlay & Khan, 1994) used to gather data on QoL. Findings revealed that the majority of people with Vitiligo tend to report poor perceptions about QoL. Men perceived QoL better when contrasted with women. Individuals with both types of Vitiligo (white patches on exposed and unexposed regions) tend to report poorer perceptions about their QoL. No demographic factor significantly correlated with QoL. Interestingly, only one clinical factor which was percentage of Vitiligo spreading on body significantly negatively correlated with QoL. It was found that Vitiligo greatly affected person's psychosocial functioning rather than physiological complications. This study identify psychosocial aspects of Vitiligo that could help in organizing therapeutic interventions for patients whose psychosocial functioning are disturbed due to their skin condition.

Keywords: Demographic factors, Clinical factors, Quality of Life

People with different skin diseases are at greater risk to have psychosocial problem, and they can remain even after the skin gets healed.

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Signs of psychogenic pressure can prompt skin conditions which for the most part prompts psychological disturbance which further may leads to poor mental health, poor QoL and appearance-related schemas (Morrone, 2004). Having a skin condition Vitiligo eventually influences an individual's insights about self-perception, confidence, impact their mental wellbeing and functioning, and prompts apparent stigmatization and poor QoL. It's significant in light of the fact that a poor body image is regularly connected with a high likelihood of sadness, low confidence, dietary issues and self-destructive ideation. Unfortunately, skin conditions can have a major social effect, especially in association with family relationships and molding and taking care of associations. Unusual reactions from others, including questions, comments, looking, or evading, can be contemplated in all regards in a real sense, actuating the adverse consequences on QoL related with the actual incidental effects (Morrone, 2004).

Visible skin related issues can cause major social burden, particularly comparable to build fellowships and keeping up with connections particularly in people determined to have Vitiligo (Morrone, 2004). Vitiligo is the pigmentary issue in which lesions happens on skin. It causes difficulties and apparent debilitations in all nations all around the world yet it is more recognizable and risky in brown complexion individuals because of the white patches on darker tone (Parsad, Dogra & Kanwar, 2003). It is otherwise called Leucoderma (lecuo=white, derma=skin). The condition is characterized due to irregular light-hued and white injuries on the skin. It is one of the issues that are more significant and genuine socially than medically (Osman, Elkordufani, & Abdullah, 2009).

However, previous researches concluded that different demographic and clinical factors tend to affect QoL of individuals with Vitiligo such as gender, family system, monthly family income, age at diagnosis, duration of condition, type of Vitiligo, percentage of Vitiligo affecting the body that create disturbances in psychosocial functioning of individuals with this autoimmune condition (Parsad, Dogra, & Kanwar, 2003).

Quality of life (QoL)

The concept of QoL is interconnected to abstract prosperity as well. The QoL as a construct has four components: 1) sense of contentment with life, 2) happiness, 3) positive sentiments 4) negative emotions such as prevailing sensation of uneasiness, discouragement, trouble, etc (Ferrans et al., 2005). QoL is a broader term than monetary creation and expectations for everyday comforts. It incorporates the all constructs that impacts what individuals esteemed in living, coming to past its material side. Human prosperity relies upon what resources empower individuals to do and to be that helps to enhance individual’s overall QoL (Jaiswal, Nayak & Shah, 2016).

The concept of QoL might vary contingent upon the subjective and objective approach. The previous researches identified the significance of wellbeing, expectations for everyday comforts and individual characteristics of the individual identified with person's societal position, just as the authentic elements of their material, social and common habitat. The last approach focuses on the person's subjective feeling of fulfillment with life coming about because of the assessment of different aspects of their life and life overall (Juczynki, 2006; Kamran, 2012).

Domains of QoL

Qualitative approach was used to introduce the model. Factor analysis was employ to gather associated factors in to the QoL domain. Final model concluded four components of QoL: physical health, psychological/spiritual, social and economic, and environment (Ferrans et al., 2005) as follows:

Physical Health. This domain carries the information regarding general health, health care facilities provided to the patients, amount of pain experienced by people, and energy (fatigue) required for daily activities, capability of the patients to take care of themselves without any help, personal control over life and chances for living long (Ferrans et al., 2005; Kamran, 2012).

Psychological/Spiritual. This domain of QoL contain peace of mind, believe in God, attainment of certain desires, overall pleasure and fulfillment in life, physical appearance and one’s own self, bodily image and appearance, negative and positive feelings, self-esteem, spirituality, religion, personal beliefs or values, thinking, learning, memory and concentration (Ferrans et al., 2005; Kamran, 2012).

Social and Economic. It deals with satisfaction towards and importance of peers, emotional support from family as well as from other, neighborhood, home, career, education and how well a person can manage their financial needs, satisfaction with and importance of children and having them, pleasure and support from family specially spouse (Theofilou, 2013).

Environment. This domain of QoL contained monetary assets redemption, actual wellbeing, security wellbeing and social consideration, openness and quality, home climate openings for gaining new data and abilities support in and opportunities for diversion, relaxation time exercises, actual climate and transport (Ferrans et al., 2005; Kamran, 2012). QoL includes medical and non-clinical aspects of life incorporating different life functioning. Physical functioning is an ability of a person to perform daily life activities. Psychological functioning refers emotional functioning as well (Theofilou, 2013).

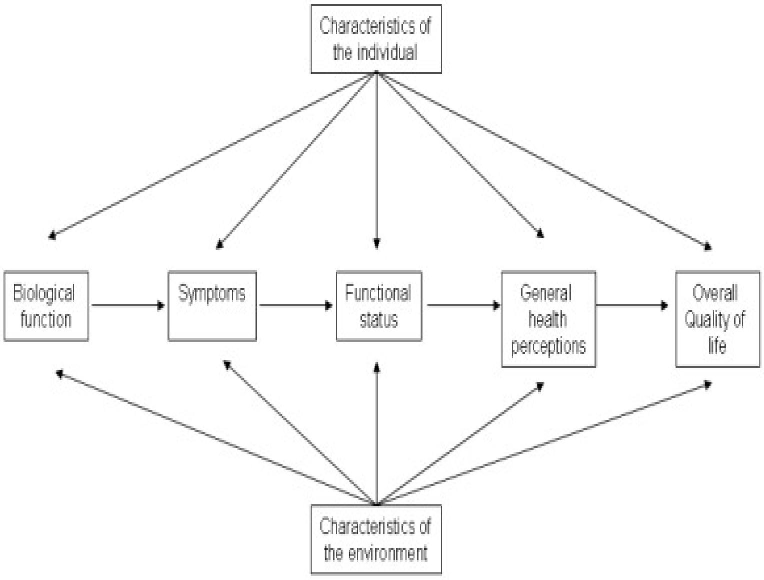
Theoretical Framework

Revised Wilson and Cleary Model of Health-Related Quality of Life. As suggested by this model, there are four major factors of QoL, such as: biological factors, manifestation/symptoms, functional or health status, and general wellbeing observations. Characteristics of the individuals and individual’s health conditions have significant effect on these elements, just as on QoL. Changes in biological functioning or immune system can clout all the consequent elements of QoL including manifestations, health status, and overall general QoL. Patients with different autoimmune conditions which are manageable but not curable change the perceptions of individuals due to the symptoms they suffer from. It affects the functional status and perceptions of individuals about their overall QoL (Wilson & Cleary, 1995; as cited in Daria, 2008).

Some of the time natural changes don't deliver side effects, and at times manifestations are seen without an organic reason. This element makes indications absolutely extraordinary to the individual and may fluctuate from somebody who is encountering a similar illness process. It is critical to quantify the impact of side effects on the QoL. The following dimension of the modified Wilson and Cleary model identifies the capacity to play out specific undertakings and is frequently impacted by organic capacity and side effects. In any case, it is by and by imperative to survey utilitarian status as a different variable since it may not be completely related with natural capacity or manifestations (Daria, 2008).

Figure 1

Adapted from: Revised Wilson and Cleary model of Quality of life. Journal of Health Quality of Life Outcomes, 2005



Literature suggested that mostly women perceive poorer QoL as compared to men, as they experience psycho-social problems at workplace or in peer settings that eventually disturbed their QoL. Many researchers have found that people with Vitiligo experience low QoL, perceived stigmatization , adjustment issues, biasness at work places, less marriage opportunities, poor psychological health and so on (Hedayat et al., 2016;

Morrone, 2004). Different sociodemographic and clinical factors also have impact on QoL. Research indicated that clinical factors have played major role in poor perceptions about QoL rather than sociodemographic ones. Duration of Vitiligo, age at the onset of vitiligo, type of vitiligo and percentage of vitiligo affected overall body have significant negative correlation with QoL (Jaiswal, Nayak, Kamath & Kadri, 2016).

Boza et al. (2016) examined QoL in grown-up patients through the VitiQoL and Dermatology Life Quality Index (DLQI). Individuals were chosen from a dermatology unit facility and from a private practice in Porto Alegre. A significant relationship was found between VitiQoL and DLQI. Furthermore, sociodemographic and clinical factors such as duration of condition and type of Vitiligo were also found significantly correlated with QoL. Men perceive their QoL better as compared to women.

Rationale of the Study

Actual appearance is usually determine by individual’s face. Any deformation actual appearance influences the person’s general QoL adversely. People with visual skin condition might encounter various psychosocial entanglements which may distinctive across various cultures and societies. Vitiligo is one of a skin condition that has greater effect on person's physical and psychological health. In Pakistan, researchers tend to focus clinical aspects of Vitiligo such as treatment choices, predominance, mental comorbidities and dietary limitations with less consideration on the psychological and social issues people experiencing in daily life (Ahmed, Ahmed & Nasreen, 2007). Nonetheless, this study will help to recognize sociodemographic and clinical determinants encompassing the hindrances that influence one's QoL that should be identified, surveyed and overseen.

Hypotheses

1. There is likely to be a significant relationship between sociodemographic factors, clinical factors and QoL.
2. There is likely to have a significant gender difference in terms of QoL.

3. There is likely to be significant differences in three groups of Vitiligo in terms of QoL.
4. Sociodemographic and clinical factors are likely to be significant predictors of QoL.

Method

Research Design and Sample

A Cross-sectional Correlational research design was used in the present study. Sample for this study was recruited using purposive sampling strategy from skin units of government and private hospitals in Lahore city. Total sample (*N*=120) was 58(48.3%) patients with exposed Vitiligo, 29(24.2%) patients with unexposed Vitiligo and 33(27.5%) patients with both types (exposed/unexposed) of Vitiligo. In terms of gender representation, sample comprised of 36 (30%) men, 84 (70%) women with mean age of 30 years (*SD* = 10.4). Inclusion and exclusion criteria of the present study was as following:

Inclusion Criteria

- Individuals who were diagnosed with Vitiligo as screened and referred by physician. The diagnosis was based on pale and milky white patches on the skin and the absence of melanocytes.
- Both men and women were taken.
- Individuals with both exposed and unexposed Vitiligo were included.

Exclusion Criteria

- Individuals with any other physical or psychological conditions.
- Individuals with any skin condition other than Vitiligo such as acne, allergies and psoriasis.
- Individuals who can’t read and write were excluded.

Assessment Measures

The following questionnaires were utilized in the present study:

Demographic Information Sheet. A self-constructed demographic information sheet was developed to collect personal information of individuals such as age, gender, education, marital status, family system, monthly family income.

Clinical Information Sheet. Clinical information sheet was used to gain exclusive information of the individuals with Vitiligo such as age at the onset of Vitiligo, duration of condition, body part affected by Vitiligo, types of Vitiligo, percentage of Vitiligo spreading on body.

Dermatology Life Quality Index (DLQI). Skin related researches, usually utilized DLQI scale. It incorporates 10 statements and measures the impact of skin conditions over the past 7 days on fundamental parts of regular daily existence. Each item has 4 possible responses: (0) *not relevant at all,* (1) *a little,* (2) *a lot* and (3) *very much*. The highest possible score is 30. High results associated with poor QoL. The ranges of scores are as follows: 0-1 no impact on patient's life, 2-5 tiny effect on patient's life, 6-10 mild effect on patient's life, 11-20, huge effect on patient's life, 21-30 highly impact on patient's life (Finlay & Khan, 1994).

Procedure

Before conducting research authorization letter were given over to the various heads of dermatological clinics. After getting formal permission the researcher briefs people about privacy of all got data from them and consent was took. The members were given the demographic sheet, clinical data sheet, and Dermatology Life Quality Index (DLQI) to complete. Administration procedure was directed after detailed guidelines. Data was analyzed by SPSS version 22.0

Ethical Considerations

In order to plan this study, some ethical deliberation was conserved in mind. The tool was used after getting acceptance from the concerned author through e-mail. In response to our application, an authority letter was given from the Institute of Applied Psychology, University of the Punjab, Lahore, which represented the rationale of research, presented to the head of the hospitals for getting acknowledgement of data collection. Consent form was given to all the participants by the researcher to pursue their permission. After getting the formal permission from all relevant sources, data collection was started and questionnaires were given only to those who were eligible as per the inclusion and exclusion criteria. Obscurity of the patients and confidentiality of the data was maintained.

Results

Table 1

Demographic Information of Individuals with Vitiligo (N=120)

Characteristics	*f(%)*	*M(SD)*
Age		30.0(10.4)
Gender		
Men	36(30%)	
Women	84(70%)	
Marital Status		
Unmarried	81(67.5%)	
Married	38(31.7%)	
Divorced	0	
Widow	1(.8%)	
Education		
High School	34 (28.3%)	
Undergraduate	16(13.3%)	
Graduate	37(30.8%)	
Post-graduate	33(27.5%)	
Family system		
Nuclear	72(60.0%)	
Joint	48(40.0%)	
Monthly family income (in PKR)		116617.0(176217.0)

Table 2

Clinical Information of Individuals with Vitiligo (N=120)

Characteristics	*f(%)*	*M(SD)*
Age at onset of Vitiligo		23.3(9.47)

DOV	6.5(5.6)
BAV	
Hands	2(1.7%)
Feet’s	3(2.5%)
Face	24(20.0%)
Neck	2(1.7%)
Belly	6(5.0%)
Legs	8(6.7%)
Arms	1(.8%)
More than one body part	74(61.7%)
Types of Vitiligo	
Exposed	58(48.3%)
Unexposed	29(24.2%)
Both	33(27.5%)
Percentage of Vitiligo spreading on body	32.2(21.8)

Note: DOV= duration of vitiligo; BAV= body parts affected by vitiligo

Most individuals with Vitiligo reflected poor perceptions about QoL as indicated by their respective scores.

Table 3

Descriptive Statistic for QoL in Individuals with Vitiligo (N=120)

					Range			
Variable	*M*	*SD*	*k*	*α*	Actual	Potential	Skewness	Kurtosis
DLQI	12.5	5.43	10	.78	0-30	1-25	-.47	-.34

Note: *M*=mean, *SD*=standard deviation, *k*=no. of items, α= Reliability coefficient, DLQI= Dermatology life quality index.

The mean scores revealed that most of the individuals tend to report poor QoL. Additionally people who have both kinds of Vitiligo quite often have poor QoL, as indicate by their scores.

Table 4

One way ANOVA comparing QoL in Individuals with Exposed, Unexposed and Both Type of Vitiligo (N=120)

	Exposed (n=58)	Unexposed (n=29)	Both (n=33)	F	p	Partial
Variables	M (SD)	M (SD)	M (SD)	(2,117)		η^2
DLQI	13.7(4.22)	7.17(5.30)	15.1(4.21)	28.07	.00***	.32

Note: DLQI= Dermatology life quality index, M= Mean, SD= Standard deviation, **p<.05, **p<.01, ***p<.001*

As scores depicted that individuals with both types of Vitiligo tend to report poorer QoL.

Table 5

Comparison of QoL on the Basis of Gender in Individuals with Vitiligo (N=120)

Variables	Men		Women		*t(118)*	*p*	95%CI		Cohen's d
	M	*SD*	*M*	*SD*			LL	UL	
DLQI	10.2	5.09	13.4	5.31	-3.0	.00**	-5.28	-1.13	0.61

Note: DLQI= Dermatology life quality index, M=Mean, SD= Standard Deviation, CI=Confidence interval, LL: Lower limit, UL: Upper limit, * p < .05, ** p < .01,*** p < .001

The scores indicated that Vitiligo tend to have greater impact on QoL of women (M= 13.4, SD= 5.31) as compared to men (M=10.2, SD= 5.09) with statistically significant difference $t(118) = -3.0$, p<.001, d=0.

Table 6

Pearson Product Moment Correlation among Sociodemographic and Clinical Factors with QoL (N=120)

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Age	-	-.21*	.00	.09	.11	.65***	.81***	.42***	.09	.13	.29**	-.07
Gender		-	-.09	.08	.02	-.19*	-.26**	.11	.10	.03	.24**	.27**
Education			-	-.07	.23*	-.16	.05	-.02	.00	-.09	-.07	.08
Family system				-	-.05	.08	.06	.04	-.06	-.02	.04	-.08
Monthly family income					-	-.03	.14	-.01	.00	-.01	-.03	.09
Marital status						-	.59***	.22*	-.07	.06	.07	-.15
Age at diagnosis							-	-.13	-.00	-.03	-.03	-.13
D.O.F								-	.22*	.32***	.61***	.10
B.A.V									-	.47***	.52***	.08
T.O.F										-	.43***	.03

P.O.V	-	-.34***
DLQI		-

Note: DLQI= dermatology life quality index. *$p<.05$, **$p<.01$, ***$p<.00$; D.O.F= duration of Vitiligo; B.A.V= Body part affected by Vitiligo; T.O.F= types of vitiligo; P.O.V= percentage of vitiligo.

The findings revealed that sociodemographic factors were not found significantly correlated with QoL. Only one clinical factor percentage of Vitiligo spreading on body had significant negative correlation with QoL which means as Vitiligo patches increases or spreads on body, it ultimately decreases individual's QoL. To find out the predicting role of sociodemographic and clinical factors Regression analysis was run.

Table 7

Multiple Regression Analysis Predicting Quality of Life (QoL) from Psychosocial Factors in Patients with Vitiligo (N=120)

Model 1		DLQI	
Sociodemographic Factors	B	R^2	ΔR^2
Constant		.47	.16
Age	.22		
Gender	.43***		
Education	.15		
Family system	-.01		
Monthly family income	.00		
Marital status	-.17		
Model 2			
Clinical Factors			
Constant		.57	.23
Age at Diagnosis	.00		
D.O.F	-.04		

B.A.V	-.21
T.O.V	-.11
P.O.V	-.43**

Note: DLQI= Dermatology life quality index, **p*<.05, ***p*<.01, ****p*<.001; D.O.F= duration of Vitiligo; B.A.V= Body part affected by Vitiligo; T.O.F= types of vitiligo; P.O.V= percentage of vitiligo.

Regression analysis indicated that sociodemographic factors were not significant predictors of QoL whereas only one clinical factor percentage of Vitiligo spreading on body was found as significant predictor of QoL.

Overall findings of the current research suggested that most people with Vitiligo have negative insights about their QoL. Men reported better QoL rather than women. Individuals with both types of Vitiligo tend to report poorer QoL as compared to other groups. There are multiple psychosocial factors which may associate or influence QoL other than sociodemographic and clinical factors. As in the present study no sociodemographic factor was correlated with QoL. Moreover, only one clinical factor Vitiligo spreading on body was significant negative predictor of QoL which indicated that when Vitiligo lesions increases on body, it ultimately decreases individual's QoL.

Discussion

The present research was conducted to investigate sociodemographic and clinical factors influencing QoL of individuals with Vitiligo. The goal of the study was to assess how the majority of people with Vitiligo report their QoL. Moreover, it intends to explore the sociodemographic and clinical characteristics related with Vitiligo and to figure out the factors that affecting their QoL. The primary finding showed that most people with Vitiligo tend to report poor perceptions about QoL. Nearly, men recognize their QoL as better. Generally in societies, women quite often highlighted or feature their sentiments, feelings, considerations and inconveniences before others which in the end influence their QoL contrarily and cause aggravations in all areas of their lives. While, men conceal their feelings and hardships before individuals and attempt to deal with the circumstances productively, which work with their QoL in an efficient manner. The finding was consistent with Gafaar (2018).

Second finding of the research indicated that people with the both types of Vitiligo report more unfortunate and negative views about their QoL as compared to other vitiligo groups. Past studies have suggested that individuals with both types of Vitiligo are probably going to encounter more vilification and report antagonistic mental results that at last influence their insights about QoL adversely. The finding was in line with Borimnejad, Yekta, &Nasrabadi (2006).

Results of the current research suggested that sociodemographic factors were not significantly correlated with QoL. Different investigations proposed that QoL affected by various person's characteristics including individual inclinations, ethics, convictions, socio-social qualities and great social associations. All these elements have greater impact on individual’s QoL (Pahwa, Mehta, Khaitan, Sharma & Rammam, 2013). A research reported that there are other geographic determinants that influence the QoL of individuals living with skin conditions. However, only sociodemographic factors does not influence QoL as a single factor. These findings are in line with literature (Gafaar, 2018; Borimnejad, Yekta, &Nasrabadi, 2006).Furthermore, only one clinical factor percentage of Vitiligo spreading on body was significantly negatively correlated with QoL. Finding suggested that as Vitiligo spreads rapidly on body it ultimately decreases QoL of individuals. This finding is consistent with the research conducted by Larsen and Lubkin (2005). In the light of Wilson and Cleary model of QoL (2005) the findings of the current study suggested that Vitiligo caused significant negative impact on overall QoL of individuals as they experienced symptoms regarding their condition which causing distress and change their perceptions regarding health status that ultimately change or affect their view about QoL.

Limitation and Suggestion

Enlistment of participants was difficult because of non-accessibility of explicit people with Vitiligo. To build the generalizability of the study the research could be reproduced to more clinics and more urban communities in Pakistan. Furthermore, different psychosocial factors associated with vitiligo should be added in future investigations to find out their relationship with demographic and clinical factors.

Conclusion and Implications

Vitiligo is a skin condition in which loss of pigments created. Social changes and treatments are fundamental for its management alongside medicine (American Vitiligo Research Foundation, 2014). The current research presumed that most people with Vitiligo reported poorer perception about QoL. People who have both types of Vitiligo are probably showed more disturbed or impaired QoL. It is necessary to recognize sociodemographic and clinical variables related with Vitiligo which could help in leading mental mediations for those whose psychosocial working are hindered because of this skin condition. Mindfulness projects ought to be held to challenge odd notion convictions in regards to Vitiligo.

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