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QUALITY OF LIFE, SELF-ESTEEM AND PERCEIVED SEVERITY IN A MEXICAN POPULATION WITH VITILIGO

CALIDAD DE VIDA, AUTOESTIMA Y SEVERIDAD PERCIBIDA EN UNA POBLACIÓN MEXICANA CON VITÍLIGO

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Resumen

Objective. To estimate a profile that would allow us to know the quality-of-life impairment in the adult population with vitiligo based on sociodemographic and clinical variables, self-esteem and disease severity. Method. A total of 359 people with an age range between 18 and 75 years (M = 37.81; SD = 10.03) participated. The Vitiligo-Specific Quality of Life Instrument and the Rosenberg Self-Esteem Scale were applied. Results. 80.8% of the participants reported significant quality of life impairment, 91.9% perceived a significant degree of severity, and 71.9% reported high self-esteem. Quality of life correlated with self-esteem and perceived severity. In the comparative tests there was significance in quality-of-life impairment by marital status, education and type of vitiligo. Conclusions. The profile with greater quality-of-life impairment was in patients without a partner, with less than 12 years of schooling and generalized or universal types of vitiligo. Self-esteem was lower in those without a partner and with less than 12 years of schooling. Perceived severity increased with disease duration (>6 years), active vitiligo, genital area involvement and with generalized or universal types of vitiligo.

Key words: Vitiligo, quality of life, self-esteem, psychodermatology, VitiQoL.

Abstract

Objetivo. Estimar un perfil para conocer el deterioro de la calidad de vida en población adulta con vitíligo a partir de variables sociodemográficas, clínicas, autoestima y severidad percibida. *Método*. Participaron 359 personas con un rango de edad de 18 a 75 años (*M* = 37.81; *DE* = 10.03). Se aplicaron el Vitiligo-Specific Quality of Life Instrument y la Escala de Autoestima de Rosenberg. *Resultados*. El 80.8% de los participantes reportó un deterioro de la calidad de vida significativo, el 91.9% percibió un grado de severidad significativo y el 71.9% reportó una autoestima alta. La calidad de vida se correlacionó con la autoestima y la severidad percibida. En las pruebas comparativas existió significancia en la calidad de vida por estado civil, escolaridad y tipo de vitíligo. *Conclusiones*. El perfil con mayor deterioro de la calidad de vida fue en pacientes que no contaban con pareja, con menos de 12 años de escolaridad y con tipos de vitíligo generalizado o universal. La autoestima fue menor en quienes no contaban con pareja y con menos de 12 años de escolaridad. La severidad percibida aumentó con el tiempo de diagnóstico (>6 años), vitíligo activo, afectación en la zona genital y con los tipos de vitíligo generalizado o universal.

Palabras clave: Vitíligo, calidad de vida, autoestima, psicodermatología, VitiQoL.

Vitiligo is a chronic skin disease that causes a loss of natural color (pigment) from areas of the skin. The result is the appearance of uneven white patches that have no pigment but feel like normal skin (National Institutes of Health [NIH], 2019). Worldwide it has an estimated prevalence of .5% to 2% in general population and the highest rates are found in India, Nigeria, Thailand, Jordan, and Mexico (Zhang et al., 2016).

The Ministry of Health in Mexico (Secretaría de Salud, 2016) assures that, vitiligo occupies between the third and fifth place in skin diseases in the country, as its percentage of prevalence in Mexican population varies from 3% to 5%, values that are above the international estimated prevalence.

The sociodemographic factors studied indicate that there is no significant difference in its manifestation by sex, although women are more likely to seek medical consultation. There is also an equal affectation regardless of race, ethnic group or socioeconomic level and it can occur at any age, however, 80% of cases occur before the age of 30 (LeWitt & Kundu, 2021).

As social beings, humans can be strongly affected by suffering from a skin disease. This is because skin conditions exert a very high impact on social relationships, psychological state and daily activities. Therefore, one must cope not only with the effects of the disease at the physical level, but also in the psychosocial aspect due to the reaction of others towards their appearance. Healthy and normal skin is essential for optimal well-being since it is a part of sexual attractiveness, a sense of well-being and a feeling of self-confidence. Therefore, any area of skin that is depigmented impacts the viewer and thus the patient (Vargas, 2014).

The negative effect on the psychosocial well-being of patients with vitiligo includes embarrassment, isolation, low self-esteem, difficulties with body image, psychosexual problems, etc. It also impacts life decisions about education, career, social participation, and physical activities (Ahmed et al., 2018). On the other hand, Pun et al. (2021) indicate that regarding their condition and psychosocial well-being, most patients reported feeling worried, unhappy, experienced social stigma, had difficulty finding a partner, believed myths or superstitions about vitiligo, and did not receive adequate counseling from health care personnel.

Although it is not a life-threatening disease, due to the psychological, social issues and comorbidities, vitiligo significantly alters the patient's quality of life (Ezzedine et al., 2021). Tudela (2009) defines the health-related quality of life (HRQL) as "the focus on assessing the subjective influence of health status, health care, and health prevention and promotion activities on the individual's ability to achieve and maintain a level of functioning that enables life goals to be achieved and is reflected in overall well-being."

Bonotis et al. (2016) refer that clinical variables such as disease duration, exacerbation, severity, extent, previous treatment, and sociodemographic factors such as age, race, and gender predict greater HRQL impairment. This highlights the importance of studies including these variables to keep improving the understanding and the differences shown by population.

Studies on quality of life in Mexico are scarce in this type of population. The research of Hernández (2012) stands out as a precedent with the objective of evaluating the HRQL in 130 patients in Mexico City. The study reported that 32.3% of the paticipants reported good quality of life, 34.6% satisfactory, 21.5% unsatisfactory and 11.5% poor quality of life. A more recent study in Mexican population was conducted by Morales-Sánchez et al. (2017) with the aim of determining the quality of life of 150 patients. They applied the vitiligo-specific quality of life instrument (VitiQoL) which was adapted and validated cross-culturally in the same study. They found a minimal impairment in participants where the body surface area affected by vitiligo was only 2% with an evolution of 3 years. Patients with genital lesions reported greater impairment. Also, there was a higher prevalence of psychiatric disorders, reporting 34% cases of depression and 60% more cases of anxiety than the normal population.

Another variable that plays an important role in the burden of vitiligo is self-esteem. Grimes and Gohara (2018) mention that "self-esteem is a powerful societal trait which impacts our happiness and satisfaction in life. It is about how we view ourselves, how we value ourselves, and our attitudes toward self. There is no doubt it is intimately related to one's appearance and body image." Whether visible or not, a skin alteration can have a destructive effect on self-esteem.

Once the disease is acquired, Pahwa et al. (2013) indicate that depigmentation often results in dissatisfaction about appearance in patients, which will lead to a negative self-perception of themselves, feeling worried and depressed, causing low self-esteem. In addition, they may show low stability in their romantic relationships and show a tendency to avoid sexual activity. This fact can be explained by the patients' low self-esteem as well as by their partner's discrimination. Given the cosmetic disfigurement caused by vitiligo lesions people can suffer from humiliation, low self-esteem and body image dissatisfaction (Sharma & Bhatia, 2017).

A study conducted in Turkey compared the HRQL, self-esteem and body image of 64 patients with vitiligo and a control group of 87 individuals with the same sociodemographic characteristics. Results showed that patients with vitiligo had significantly lower quality of life, lower self-esteem and poorer body image (Gül et al., 2017). Opposite to the above, in India Sharma et al. (2018) found no significant difference between patients with vitiligo and control group in decreased self-esteem and quality of life.

In a systematic review Ezzedine et al. (2021) found that the sociodemographic factors associated with a higher quality-of-life impairment are gender (females), younger age (<30 years or in adolescents), unmarried or single relationship status, lower education, unemployment and higher socioeconomic status. The clinical variables are vitiligo lesions in visible areas (face, hands, legs) or in genitals, progressive disease (active vitiligo), extensive body area involvement and non-segmental vitiligo (generalized and universal types).

The objective of this study was to estimate a profile that would allow to know the quality-of-life impairment in the adult population diagnosed with vitiligo in Mexico based on sociodemographic and clinical variables, self-esteem and perceived severity.

Table 1. *Characteristics of the participants*

Variable	Categories	Percentage
Marital status	Single without a partner	18.9
	Single with a partner	14.8
	Married	38.2
	Cohabitation	17.8
	Widowed	1.4
	Divorced	8.9
Schooling	< 12 years of schooling (maximum high school level)	37
	> 12 years of schooling (undergraduate and graduate)	63
Time of vitiligo diagnosis	> 6 years	69.9
	< 3 years	30.1
Status of vitiligo	Active	81.3
	Stable	18.7
Medical treatment for vitiligo	Yes	16.4
	No	83.6
Lesions in genital area	Yes	71.6
Type of vitiligo	Generalized	69.3
	Focal	17.3
	Segmental	5.3
	Universal	8.1

Method

Participants

This was a non-experimental, descriptive, correlational, cross-sectional and prospective study. The participants were 359 people (74 men, 282 women and 3 prefer not to say) with an age range between 18 and 75 years (*M* = 37.81; *SD* = 10.03). The characteristics of the participants can be seen in Table 1.

Instruments

Sociodemographic and clinical data questionnaire. The questionnaire created *ad hoc* included the sociodemographic variables of sex, age, marital status, sexual orientation, schooling and occupation. On the other hand, it included the clinical variables of time of diagnosis, treatment, active vitiligo (progressive appearance of vitiligo lesions in the last 6 months), type of vitiligo and lesions in the genital area.

Vitiligo-Specific Quality of Life Instrument (VitiQoL) (Lilly et al., 2013). It is a questionnaire consisting of 15 items that assess the effect of the disease on HRQL in the last month. Scores range from 0 (never) to 6 (all the time), being possible to obtain a score from 0 to 90 where a higher score reflects a greater quality-of-life impairment. The score is analyzed according to three established factors: participation limitation, stigma and behavior. In addition, item 16 assesses the perceived severity of vitiligo using a scale ranging from 0 (not affecting the skin) to 6 (worst case). The version adapted cross-culturally to Spanish in Mexican population by Morales-Sánchez et al. (2017) was used and the authors reported excellent reliability (α = .935). An excellent alpha coefficient was also obtained in the present study (α = .947).

A limitation of the VitiQoL instrument is that there are no suggested cut-off points for clinical interpretation. Nevertheless, the present study calculates cut-off points based on the mean and standard deviation of the total score (*M* = 39.79, *SD* = 25.64), and according to literature of HRQL measures in vitiligo, we classified the level of impairment in low, medium and high. Therefore, in the present study, a score less than or equal to 13 indicates low impairment, between 14 and 65 represents medium impairment and greater than or equal to 66 a high impairment.

Rosenberg Self-Esteem Scale (Rosenberg, 1965). It is a Likert-type scale made up of 10 items that are answered in four options ranging from "strongly agree" to "strongly disagree". The interpretation depends on the score obtained: < 25 points indicate low self-esteem, from 26 to 29 points indicate medium and from 30 or > high self-esteem. Finally, it has an internal consistency of .84 (Alonso & Romero, 2021). In the present study, the consistency of the instrument was good (α = .838).

Procedure

The research sampling was non-probabilistic using the convenience and snowball techniques. Convenience sampling was initially done when contacting groups of people with a diagnosis of vitiligo on support online groups. Simultaneously, these participants were asked to share the study among other people with vitiligo. Instruments were adapted in electronic format through Google Forms for its application online from February 1 to 24, 2022. The Institutional Review Board of the School of Psychology of the Universidad Autónoma de Nuevo León (UANL) gave its approval for the study with the file number FAPSI/032/2021, all participants gave their consent online and their anonymity was always ensured.

The exclusion criteria were a) having comorbidities and other skin diseases, b) having an intellectual and/or physical disability, c) nationality and residence other than Mexican, and d) those who refused to participate in the study. The initial number of participants was 474, of which 2 minors, 81 foreigners, 16 due to comorbidities and 16 due to response bias were eliminated. This resulted in a final participation of 359 people (74 men, 282 women and 3 prefer not to say).

Data analysis

The SPSS version 20 statistical program was used for data analysis, and for obtaining effect sizes and statistical powers the G*Power version 3 was used. Initially, the normality of data distribution was analyzed using the Kolmogorov-Smirnov test with the Lilliefors significance correction. Because the HRQL and self-esteem variables did not fit a normal distribution ($p < .05$), a decision was made to

Table 2. Frequencies and percentages in the levels of quality-of-life impairment, self-esteem and perceived severity

Variables	Men (n= 74)	Women (n= 282)	Other (n= 3)	Total (N= 359)
High HRQL impairment	14 (18.9)	60 (21.3)		74 (20.6)
Medium HRQL impairment	43 (58.1)	171 (60.6)	2 (66.7)	216 (60.2)
Low HRQL impairment	17 (23.0)	51 (18.1)	1 (33.3)	69 (19.2)
High self-esteem	58 (78.4)	197 (69.9)	3 (100.0)	258 (71.9)
Medium self-esteem	6 (8.1)	54 (19.1)		60 (16.7)
Low self-esteem	10 (13.5)	31 (11.0)		41 (11.4)
High perceived severity	11 (14.9)	40 (14.2)		51 (14.2)
Medium perceived severity	58 (78.4)	218 (77.3)	3 (100)	279 (77.7)
Low perceived severity	5 (6.8)	24 (8.5)		29 (8.1)

use nonparametric tests, that is, correlations were performed with Spearman's coefficient and tests of differences by groups with the Mann-Whitney U test, establishing the level of statistical significance when it was less than .05 ($p < .05$). In addition, for the Mann-Whitney U, Cohen's *d* (1992) was used to estimate the effect size and the parameters proposed by the same author for its interpretation: .20 small, .50 medium, and .80 large.

Results

In the descriptive analysis of the variables, the levels of HRQL, self-esteem and perceived severity were identified in the total population and by sex groups (Table 2). An 80.8% of people showed a medium to high HRQL impairment, 88.6% have a medium to high self-esteem, and finally, 91.9% perceive vitiligo with a medium or high degree of severity.

Table 3 shows significant correlations of negative orientation between quality of life and self-esteem (r_s = -.533, p = *.001)* with a large effect size, and a correlation of positive orientation between quality of life and perceived severity (rs = .557, p = .001) with a large effect size. Such findings imply that when there is a higher quality-of-life impairment the self-esteem will tend to be lower, and the perceived severity of vitiligo will be higher.

The analysis of the differences in sociodemographic variables in the quality-of-life impairment, self-esteem and perceived severity by sex, age, sexual orientation and occupation showed no significance. On the other hand, marital status and schooling did show a significant difference, indicating that patients with a diagnosis of vitiligo who were single without a partner and with less than 12 years of schooling showed a greater HRQL impairment and lower self-esteem compared to those who were married and had more than 12 years of schooling (Table 4).

Table 3. *Correlations of quality-of-life with psychological and sociodemographic variables*

Variables	r_s	Sig.	p	1-β
Self-esteem	-.533	.001	.729	1.00
Perceived severity	.557	.001	.746	1.00
Age	-.058	.271	.240	.99

Note. p = *.10 small, .30 medium, .50 large*
r_s= Spearman's rho, *Sig.*= statistical significance, *p* = effect size, *1-β* = statistical power

Table 4. Significant differences in the psychological variables by sociodemographic variables

	Marital status						
	SWP	M					
Variables	Average ranges		*Z*	*U*	*p*	*d*	*1-β*
Quality of life	119.44	94.84	-2.796	3540.00	.005	.415	.79
Self-esteem	87.10	110.89	-2.711	3576.50	.007	.370	.72
	Schooling						
	< 12 years	> 12 years					
Variables	Average ranges		*Z*	*U*	*p*	*d*	*1-β*
Quality of life	195.24	171.03	-2.135	13001.5	.033	.260	.85
Self-esteem	154.29	195.13	-3.608	11609.5	.001	.385	.88

Note. p = statistical significance, d (effect size) = .20 *small*, .50 *medium*, .80 *large*, 1-*β* = statistical power, SWP= single without a partner, M= married.

In addition, in the contrast of the differences in the clinical variables of the disease, only the treatment variable did not show significance with any psychological variable, meanwhile, when analyzing the differences according to the time of diagnosis, active vitiligo and lesions in the genital area, significant differences were observed in the perceived severity. That is, the perceived severity of vitiligo increases when the time of diagnosis is greater than 6 years, when the disease is progressive and when there is involvement in the genital area (Table 5).

In the test of differences of the types of vitiligo with psychological variables, only the generalized-universal and focal-segmental comparisons were not significant. Table 6 shows the significant differences, concluding that the perceived severity is greater in generalized vitiligo than in the focal and segmental types, and likewise, it is greater in universal vitiligo than in the focal and segmental types. On the other hand, the quality-of-life impairment was only significant in the comparison of generalized-segmental and segmental-universal types. This indicates that the HRQL impairment will be greater when there is a diagnosis of generalized and universal vitiligo compared to the segmental type.

Table 5. Significant differences of psychological variables by clinical variables

	Time of diagnosis						
	< 6 years	> 6 years					
Variable	Average ranges		*Z*	*U*	*p*	*d*	*1-β*
Perceived severity	156.72	190.02	-2.834	11040.00	.005	.310	.76
	Active vitiligo						
	Yes	No					
Variables	Average ranges		*Z*	*U*	*p*	*d*	*1-β*
Perceived severity	189.86	137.01	-3.822	6902.00	.001	.543	.96
	Genital vitiligo						
	Yes	No					
Variable	Average ranges		*Z*	*U*	*p*	*d*	*1-β*
Perceived severity	185.20	139.72	-3.760	8430.00	.001	.462	.93

Note. p = statistical significance, d (effect size) = .20 *small*, .50 *medium*, .80 *large*, 1-*β* = statistical power

Table 6. Significant differences in psychological variables by types of vitiligo

	Generalized	**Focal**					
Variable	Average ranges		Z	U	p	d	$1-\beta$
Perceived severity	165.73	116.92	-3.893	7066.00	.001	.566	.96
	Generalized	**Segmental**					
Variables	Average ranges		Z	U	p	d	$1-\beta$
Perceived severity	137.59	94.03	-2.405	1596.50	.016	.622	.85
Quality of life	137.86	90.53	-2.566	1530.00	.010	.694	.83
	Focal	**Universal**					
Variables	Average ranges		Z	U	p	d	$1-\beta$
Perceived severity	39.73	59.40	-3.367	510.50	.001	.850	.92
	Segmental	**Universal**					
Variables	Average ranges		Z	U	p	d	$1-\beta$
Perceived severity	17.95	28.79	-1.138	151.00	.008	.903	.89
Quality of life	18.89	28.17	-2.246	169.00	.025	.727	.84

Note. p = statistical significance, d (effect size) = *.20 small, .50 medium, .80 large, 1-β* = statistical power

Discussion and conclusions

In Mexico, the use of the VitiQoL has been limited, existing only as a precedent the cross-cultural adaptation of Morales-Sánchez et al. (2017) who obtained a mean of 32.1 (*SD* = 22.7), *while in the present study the obtained mean of* 39.79 (*SD* = 25.64) is higher in comparison to the above mentioned, identifying that 80.8% of the participants presented a medium and high impairment.

In comparison to international studies, the mean of VitiQoL coincides with different studies done in Brazil (M = 40.04, *SD* =27.32), Poland (M = 39.65, *SD* = 23.34) and Nepal (M = 37.2, *SD* = 24.2) (Boza et al., 2015; Iwanowski et al., 2021, Pun et al., 2021). On the other hand, it is higher than that reported in Iran (M = 30.5, *SD* = 14.5), the United States (M = 33.5) and China (M = 27.75) (Hedayat et al., 2016; Lilly et al., 2013; Zhao et al., 2021).

Regarding self-esteem, contrary to expectations, it was found that 71.9% have high self-esteem and only 11.4% have low self-esteem. Chan et al. (2013) had similar findings, reporting that 93.2% of the patients showed high self-esteem. They hypothesized that self-esteem was maybe a measure of emotional internal resilience that allows patients to create interpersonal relationships with more trust which helps to overcome the negative psychosocial effects of vitiligo. On the other hand, our findings contrast with a study in Greece, where the mean of self-esteem found in men (M= 21.95, *DE*= 4.10) and women (M= 20.69, *DE*= 4.51) of their study could be classified as low (< 25), being women the most affected (p = 0.03) (Bonotis et al., 2016).

In addition, it is striking that 80% of the participants reported not receiving medical treatment for repigmentation. This finding along with the high percentage of those expressing high self-esteem, warns about the fact that an adequate intervention for people with vitiligo should include acceptance of the disease and not a "cosmetic camouflage" as proposed in most studies (Amer & Gao, 2016; Bassiouny et al., 2021; Morales-Sánchez et al., 2022; Sarveswari, 2010). Just as it is reported by Ahmed et al. (2018), the impact of the disease on self-esteem should not be minimized because when patients were asked about the possible areas of psychological intervention that they believed were relevant, they reported that interventions aimed at increasing acceptance, confidence and self-esteem, as well as shame management, were important.

In the sociodemographic comparisons, there were no significant differences by sex in the quality-of-life impairment agreeing with several authors (Morales-Sánchez et al., 2017; Pun et al., 2021; Sawant et al., 2019), although some other have reported a greater impairment in women (Abdullahi et al., 2021; Amer and Gao, 2016; Chen et al., 2019; Hamidizadeh et al., 2020; Hedayat et al., 2016; Iwanowski et al., 2021). The only sociodemographic variables that showed significant differences were marital status and schooling, being so that patients with a diagnosis of vitiligo who are single without a partner showed greater impairment of quality of life and lower self-esteem, agreeing with Chen et al. (2019), but contrary to what was reported by Morales-Sánchez et al. (2017) in Mexico.

Regarding schooling, it was found that those with more than 12 years of schooling showed a lower HRQL impairment and higher self-esteem. Amer and Gao (2016) and Hedayat et al. (2016) agree that the higher the schooling the lower the impairment will be because higher education empowers patients with critical thinking about their disease. Oppositely, Abdullahi et al. (2021) found that the more educated the patient, the worse the quality of life will be, hypothesizing that people with more education will be dissatisfied with the outcome of the medical treatment given the time spent learning about the disease and trying different treatments for pigmentation that did not result as they expected.

The clinical variables of the disease allowed us to identify that the perceived severity of vitiligo is greater when the time of diagnosis is more than 6 years, when vitiligo is active, when there are lesions in the genital area and when there is a generalized or universal type of vitiligo compared to the focal and segmental types. Regarding the time of diagnosis, the finding agrees with Hamidizadeh et al. (2020) who indicate that the earlier in life vitiligo is present, the more areas of the skin will be affected, and the greater the spread of depigmentation the more severe the disease will be perceived.

Regarding the comparison of the group with active vitiligo and stable vitiligo, the findings of the present study are similar to those reported by Abdullahi et al. (2021) with a greater impairment when vitiligo is progressive. This may be due to patients feeling helpless and distressed as they "lose ground" to depigmentation, since even if they start repigmentation treatment more vitiligo lesions will continue to appear.

Greater perceived severity was found in those with vitiligo in the genital area agreeing with Ahmed et al. (2018), where individuals with lesions in this area found more significant impact of the disease on their personal relationships, self-confidence, depression and anxiety. In addition, lesions in this area have been significantly associated with sexual dysfunction (Amer & Gao, 2016), increased depression (Hamidizadeh et al., 2020) and poorer quality of life (Morales-Sánchez et al., 2017).

Regarding the type of vitiligo, it was found that the impairment of HRQL will be higher only when there is a diagnosis of generalized or universal type of vitiligo compared to the segmental type. Also, the perceived severity is the same in generalized and universal types, however, in both, the perception of severity will be higher compared to focal and segmental vitiligo. These findings are similar to Hedayat et al. (2016), who found greater impairment in the generalized type compared to the localized and segmental (generalized < localized < segmental). In addition, Abdullahi et al. (2021) report a poorer quality-of-life when vitiligo lesions are on visible areas of the skin.

Amer and Gao (2016) explain that, in the generalized and universal types, having depigmented and scattered lesions all over the body is perceived with greater severity since these are found in visible areas (face, hands, feet) being associated with shame, anger, disappointment and stigma, negatively affecting a person's chances of getting a job in an interview and thus restricting career options.

In summary, the quality of life was significantly affected in 80.8% of the participants and 91.9% perceived vitiligo with a significant degree of severity, despite this, 71.9% showed high self-esteem indicating good adjustment and acceptance of the disease. When comparing the VitiQoL scores with other studies, geographical differences were identified, since the scores in Mexican population of the present study and Morales-Sánchez et al. (2017), as well as the scores in Brazilian population (Boza et al., 2015) are higher than the scores in American, European and Asian populations (Hedayat et al., 2016; Lilly et al., 2013; Zhao et al., 2021).

The differences among populations might be explained by the fact that a greater impairment of HRQL has been found in individuals who have a dark skin tone (phototypes IV-VI) compared to a light skin tone (phototypes I-III) (Sharma & Bhatia, 2017) as the contrast of skin and vitiligo lesions is more prominent in darker skin types. As discussed by Chen et al. (2019), the literature indicates that the HRQL of patients with vitiligo varies considerably according to different skin phototypes and cultures, for example, in European and Asian countries people tend to have lighter skin, and in Latin America people tend to have darker skin, which highlights the importance and need for more studies of the burden of vitiligo on the quality of life of Latino population.

Limitations

The study has limitations due to the type of sampling, since the convenience and snowball methods were used, in addition to carrying out the data collection on online platforms. The study does not have a representative, and the vast majority of participants are women. On the other hand, since the information was collected during the period of confinement due to the COVID-19 pandemic, the perception of the quality of life of patients in general may have been biased, associating the impairment of HRQL and burden of the disease to issues related to the pandemic rather than the disease itself. Another limitation is that tangible measures of clinical characteristics of the disease, such as measuring the Fitzpatrick skin phototypes and the percentage of depigmented area on the body, were not included.

However, compared to most studies carried out in population living with vitiligo, which usually are carried out in clinical small samples, we can say that a strength of the study is that it has a large number of participants with people from all the states of Mexico, which take us near to characterizing the Mexican population.

Recommendations

Sociodemographic variables such as age, sex, marital status, sexual orientation, schooling and occupation should be further analyzed since there are discrepancies in the literature regarding the influence of these variables on the HRQL of vitiligo. On the other hand, other variables that can be incorporated and that have shown relevance in the disease are socioeconomic status and religion (Ezzedine et al., 2021).

In addition to the clinical variables that were included here, other variables that could make a difference and enrich the data would be to ask the age of onset of vitiligo, the exact number of years with the diagnosis and whether they associate the onset of the disease with a psychosocial stressor that triggered the dermatosis. It would also be interesting in future studies to investigate the reasons why people are not receiving medical treatment, since 80% is an alarming figure that is being neglected. It is necessary to find out whether this is by choice or due to external limitations such as inaccessibility to medicine, lack of dermatologists in the public sector, high cost of private consultations, etc. Likewise, it would be advisable to record how many people currently receive and whether they have ever received medical treatment for vitiligo and psychological treatment, as these are relevant aspects for future statistical analysis.

On the other hand, we highlight the importance of using a vitiligo-specific quality of life instrument to characterize the impairment and burden of the disease more accurately by using instruments such as the Vitiligo-Specific Quality of Life Instrument (VitiQoL) and the Vitiligo Impact Scale-22 (VIS-22). Furthermore, since these are instruments created a few years ago and relatively little used worldwide, it might be convenient to use both instruments to compare the psychometric properties of each one and whether they reflect the same impairment of HRQL to know if they are equivalent.

Conclusion

Based on what has been analyzed, we can see that the profile with the greatest HRQL impairment is manifested in patients who do not have a partner, who have less than 12 years of schooling and who have generalized or universal types of vitiligo.

Likewise, self-esteem is lower only in those without a partner and with less than 12 years of schooling and the perceived severity increases when the time of diagnosis is greater than 6 years, when there is active vitiligo, when there are lesions in the genital area and when there is a generalized or universal type of vitiligo. Finally, the variables of sex, age, sexual orientation, occupation, and receiving medical repigmentation treatment for vitiligo did not make a difference in the impairment of HRQL, self-esteem and perceived severity.

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