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VALIDATION OF SATISFACTION WITH LIFE QUESTIONNAIRE IN MEXICAN POPULATION

VALIDACIÓN DEL CUESTIONARIO DE SATISFACCIÓN

CON LA VIDA EN POBLACIÓN MEXICANA

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Abstract

Well-being (WB) is associated with Satisfaction with Life (SWL), which includes Physical Satisfaction and Social Satisfaction. Life satisfaction refers to the personal evaluation of the quality of one's own experiences and is related to a personal feeling of well-being or happiness. Objective: To standardize SWL questionnaire in Mexican adults using a mental health app. Methods: Cross-sectional, with selection of *n* for convenience by snowball method and psychometrics with users of the mental health app *Mindsurd*. The users answered SWL Questionnaire built on purpose, in order to analyze its reliability with the MKO of Sampling Adequacy, identify correlations and perform Bartlett's sphericity test. Confirmatory factor analyzes were performed to estimate maximum likelihood with Structural Equation Modeling (SEM) to assess the validity of the construct. Results: n = 18, 657, $\bar{x}$ = 26 years old (SD = 8), 83.6% were female and 60% were residents of Mexico City. Reliability coefficient of 0.871, with r = 0.593 to 0.302; MKO = 0.96, Bartlett's sphericity test

= 0.0001 or significant relationships between items. 53.35% explains the total variation of the data. A distribution of 15 items was observed in three factors: Satisfaction with Life, Physical Satisfaction and Social Satisfaction. The model showed a good fit. Conclusion: The SWL Questionnaire is valid and adaptable in the adult Mexican population. **Keywords:** life satisfaction, standardization, Mexican population, structural equations.

Resumen

El Bienestar (BE) está asociado a la Satisfacción con la Vida (SV), que incluye la Satisfacción Física y la Satisfacción Social. La satisfacción con la vida se refiere a la evaluación personal de la calidad de las propias experiencias y está relacionada con un sentimiento personal de bienestar o felicidad. Objetivo: estandarizar el cuestionario SV en adultos mexicanos utilizando una aplicación de salud mental. Métodos: transversal, con selección de n por conveniencia por método bola de nieve y psicometría con usuarios de la app de salud mental *Mindsurf*. Los usuarios respondieron el Cuestionario SV construido ex profeso, con el fin de analizar su confiabilidad con el MKO de Adecuación Muestreo, identificar correlaciones y realizar la prueba de esfericidad de Bartlett. Se realizaron análisis factoriales confirmatorios para estimar la máxima verosimilitud con Structural Equation Modeling (SEM) para evaluar la validez del constructo. Resultados: n = 18, 657, $\bar{x}$ = 26 años (DE = 8), 83.6% eran del sexo femenino y 60% residentes en la Ciudad de México. Coeficiente de confiabilidad de 0,871, con r = 0,593 a 0,302; MKO = 0,96, prueba de esfericidad de Bartlett = 0,0001 o relaciones significativas entre ítems. El 53,35% explica la variación total de los datos. Se observó una distribución de 15 ítems en tres factores: Satisfacción con la Vida, Satisfacción Física y Satisfacción Social. El modelo mostró un buen ajuste. Conclusión: El

Cuestionario SV es válido y adaptable en la población adulta mexicana.
Palabras clave: satisfacción de vida, estandarización, población mexicana, ecuaciones estructurales.

Introduction

Well-being (WB) is a construct related to the perception that people have in order to evaluate in a positive, functional and adaptable way these three aspects: physical, psychological and social functioning; and, as a whole, these are linked to cognitive, emotional, behavioral, and contextual processes (García-Viniegras et al., 2000); if these aspects are perceived positively, we would speak of well-being. To the WHO, WB dissociates from the unidirectional concept of health (somatic) and is considered as a multifactorial state that includes not only the physical, but also the mental, and social scopes. Some authors state that WB is also related to the sociocultural environment as well as to the physical and psychological scopes (OMS, 2022).

In a different approach, positive psychology identifies psychological WB as the positive functioning related to skills and personal growth. With this point of view, Carol Ryff developed six dimensions to identify such theoretical assumptions: Self-Acceptance, Autonomy, Personal Growth, Purpose in Life, Positive Relations with Others, and Environmental Mastery (Manderscheid et al., 2010). However, they excluded the physical scope as a perception of adequacy, as a capability, and as a perception of physical satisfaction (Tomczyk et al., 2021). In this sense, a concept that has been used in conjunction with well-being and that includes it and adds aspects related to people's daily lives is Satisfaction with Life (SWL).

Pérez mentions that life satisfaction should be understood as a personal evaluation of the quality of one's own experiences and how they are relat-

ed to a personal feeling of well-being or happiness. This also refers to the personal perception about one's own situation in life, based on one's own objectives, expectations, values, and interests, which will interact with the meanings of the reference cultural context (Pérez & Alegre, 2014).

Some researchers have found that Mental Health is correlated with perceptual aspects of well-being; however, the correlation is more marked with Life Satisfaction, Social Well-being and especially Psychological WB (Moreta et al., 2018).

Ryff's theoretical model, the WHO created the Ten Well-Being Index (WHO-10), but with a non-parametric validation and with a clinometric view by experts. Theoretically, they do integrate the concepts of quality of life, health, and components to value satisfaction and physical functionality (Topp et al., 2015). The problem with the measurement of WB regarding the interest, not only of psychologists, but also of health and social development professionals in general (Faruk et al., 2021), and for public policies, is that if we start from Ryff's theoretical framework, the questionnaires created with this structure exclude the Physical WB variable, and that under the worldwide results of the factorial structure, it is hypothesized that the measurements are not an operationalizable reflection of the proposed model. For all this, there are concerns about factorial validity issues, and moreover about the level of fit to reality (Abbott et al., 2006). In other studies, Psychological WB constructs are linked to SWL, which is very closely related to the cognitive assessment of WB and general aspects of life. However, satisfaction is associated with the value that an individual gives to aspects of life and is not only a perception as the construct of WB states (Self-Perception, Physical Perception, Perception of Others, Perception of the Environment) (Moreta-Herrera et al., 2018).

çThe WB construct provides an idea of what an individual is living in a specific moment when he or she is in a certain health condition, as it is shown in the study carried out during the COVID-19 pandemic in Germany, where the authors found that 5% of students presented chronic pain correlated with depression and anxiety, and a lower quality of life. The authors concluded that in the face of highly stressful situations, such as the pandemic, students perceived themselves to be vulnerable and with low psychological WB (Rau et al., 2018). However, this information is not enough to identify the level of impact that these situations can generate in individuals. Physical health is a crucial factor to be considered when assessing WB and SWL, as it can indirectly affect the results and the diagnosis of who perceives him or herself to be living and feeling well. As it is known, physical pain can be activated or inhibited by thinking styles such as maximization, catastrophizing, perfectionism, and self-blame, as has been found in women with fibromyalgia, and this in turn can impact SWL regardless of other factors (such as economic and social factors) being perceived as adequate (Sandoval-Valerio et al., 2020).

The main instrument that is reported to measure satisfaction with life is the Satisfaction with Life Scale (SWLS) by Diener et al. (Diener et al., 1985). This instrument consists of five items, on a Likert scale of 7 points, where 1 is relates to “strongly disagree” and 7 as “strongly agree”, the influences range from 5 to 35. This scale evaluates the general satisfaction that the person has with their life, understanding that a higher score reflects greater satisfaction. The author Diener found that his instrument has a single factor that represents 66% of the variance, the normative data apart from the scores obtained are: 31-35, very satisfied; 26-30, satisfied; 21-25, somewhat satisfied, 20, neutral, 15-19, somewhat dissatisfied, 10-14, dissatisfied, and 5-9, very dissatisfied (Pavot & Diener, 1993).

This has been applied to various age groups, both adolescents and older adults and also with various age groups and has been useful to determine the level of satisfaction with life that the participants have (Vinaccia et al., 2019). Recent studies have reported the importance of physical activity as an indicator of SWL (An et al., 2019). Another component also recently related to SWL is good mental health. A study where social participation of young Ukrainians was assessed before the war shows positive mental health scores related to motivation to volunteer, positive mental health, and feelings of empowerment (Vus et al., 2019). In Michigan, USA, in a sample of Americans over the age of 50, it was found that those participants with the highest SWL measure had better indicators of physical health, lower pain sensation, physical limitations-functioning, lower frequency of chronic diseases, and therefore better health perception (Kim et al., 2021). Based on the literature reviewed so far, we propose the need to build a SWL scale that considers the basic aspects of WB, but that is focused on specific life situations that indicate the level of satisfaction of Mexican adults. The satisfaction factors to be assessed are the Social Satisfaction and Physical Satisfaction. In such a way, the aim of this study was to explore, validate and, in the event of obtaining a Cronbach's $\alpha \geq 0.80$, standardize this scale. Our hypothesis is that we will find correlations ≥ 0.80 between factors and items, and that the structural model will have a good fit to reality and generate a scale that contains more factors to assess satisfaction with life.

Methods

This study is psychometric, cross-sectional, convenience, snowball sampling, quantitative and non-experimental study. Study surveyed Mexican adults aged 18 - 72 of all genders, users of the *Mindsur* mental health app for mobile and tablet. To calculate the sample size, we use the formula:

Sample size n = [EDFF*Np (1-p)]/ [(d2/Z21-α/2*(N-1) +p*(1- p)], as a result of the *N*=110,000 users who answered the instrument, and with a confidence index of 99.9, *n*=1258 was obtained, however we decided to analyze *n*=18,657 (program, openepi).

The inclusion criteria were users of the *Mindsurf* mental health mobile app who accepted the terms, policies and conditions and agreed to participate in this research by informed consent and who completed all responses, including sociodemographic data. Exclusion criteria, users who were children or adolescents, who were not Mexicans, or who did not complete the instrument or the sociodemographic data.

The *Mindsurf* app for mobiles and tablets was designed to provide distance care in mental health. It is loaded with validated instruments created on purpose, and behavioral, cognitive, cognitive-behavioral, and health based interventions. It is available for Android, Huawei and iOS operating systems and can be downloaded for free. Upon registration, users must read and subsequently accept the informed consent, terms and conditions. Then, they must provide sociodemographic data. A The Satisfaction with Life diagnosis is performed with the objective instrument of this study. This app has a software for the mobile application, and a backend (which processes the information, and provides access to the data by means of software) with components for running arbitrary conversation streams and evaluating events through rules (current user context, general user status, algorithmic conversation rules, and evaluation of arbitrary messages) and the ability to connect with natural language processing systems. Anonymized interaction data of users in the app are stored in a database that can be downloaded to Excel. The Satisfaction with Life Questionnaire (QSWL) that originally had 22 items arranged in three dimensions (Table 1): Psychological, Physical and Social. Items are written in positive statements on a Likert scale ranging from Strongly Disagree (1) to Strongly Agree (4), so

that the higher the score indicates better satisfaction with life.

Table 1

Original Satisfaction with Life Questionnaire (SWL)

As an initial part of the procedure, the instrument was sent to five health psychologists with experience in validation and application of scales. The main observations of the judges to the instrument were concerning the improvement of the wording of some items, the arrangement of items of the physical dimension and the addition of the concept of SWL, since all the items begin with this verb.

Upon registration in the app, users have to answer the instrument (SWL). The chatbot's startup conversation (a conversation between the app and the user, with automatic responses previously established, which in this case were the sociodemographic categories and the questions of the instrument with the response on a Likert scale) describes the objectives, the importance of answering the instrument, and the criteria for safeguarding personal information, and its ethical and deontological management. The sample was collected from August 2021 to March 2022. The database was downloaded to Excel and an inconsistency analysis was performed to clean up users with errors, missing data, or who did not meet the inclusion criteria, such as age and nationality. Consecutively, the database with the labels was imported to IBM® SPSS® Amos™ 26.0.0 software, and the analysis to identify duplicate users was performed. Finally, the frequency analyses for gender, federal entity, measures of central tendency and dispersion for age were performed, as well as the exploratory analysis, validation analysis and the structural equations.

For the statistical analysis, it was carried out, the reliability analysis, the factorial analysis using the Kaiser-Meyer-Olkin (MKO) Measure of Sam-

pling Adequacy of item correlations, and Bartlett's test of sphericity were performed. The extraction of the factors was performed through the criterion of percentage of variance, and we used the Varimax method to identify the fit of the three factors. A confirmatory factor analysis was then performed with IBM® SPSS® Amos™ 26.0.0 software, assessing the model adjustment with the three correlated latent factors, using the maximum likelihood estimation (MLE) method, and applying the Structural Equation Modeling (SEM) methodology to evaluate construct validity, in order to determine the extent to which the observed covariance matrix is predicted.

The usage policies of the app and the informed consent are based on the Declaration of Helsinki for Research Involving Human Subjects and in Mexico's General Health Law in the Field of Research published on Mexico's Official Journal of the Federation.

Results

A sample of n = 18, 657 was obtained, $\bar{x}$ of age = 26 (SD = 8), median = 23, mode = 18. Of the total sample, 83.6% were women, 60% lived in Mexico City, 15% in State of Mexico, 10% in Jalisco, 6% in Nuevo León, and the rest in other states in the Mexican Republic. Users that were not Mexican were excluded. When conducting the reliability analysis of the Satisfaction with Life Questionnaire (QSWL), the reliability coefficient obtained was .871, the correlation of the items was r = 0.593 to r = 0.302. The factor analyses found a MKO Measure of Sampling Adequacy of item correlations between items of 0.96 and Bartlett's test of sphericity had a significance of 0.0001. Thus, it was corroborated that there are significant relationships between the items. When performing the factors extractions, the result explains 53.35% of the total variation of the data.

With the Varimax method, the three factors of the total variability were confirmed. The items were distributed into these factors as shown in Table 2.

Table 2

Positioning of items in the SWL factors

The questionnaire originally had 22 items arranged in three dimensions: Psychological Satisfaction, Physical Satisfaction and Social Satisfaction. During the reliability analysis, one item was identified as having a negative correlation, so it was decided to eliminate it (item 4). Factor analysis was then performed with 21 items, and the result showed that several items had a factorial loading on two or more factors, so it was decided to eliminate them (items 7, 11, 17, and 18).

Finally, one item had a factor load of less than 4, so it was decided to eliminate it as well (item 2). The instrument had 15 items in the end. To confirm the theoretical structure, a confirmatory factor analysis was carried out with the software IBM® SPSS® Amos™ 20.0.0, based on the results obtained in the exploratory factor analysis and assessing the fit of the model with the three correlated latent factors.

The final exploratory factor analysis was then performed with the MLE method and applying the SEM methodology to evaluate the validity of the construct. In order to determine the extent to which the observed covariance matrix is predicted, the fit indexes and the average of the standardized residuals were considered, as they provided a better fit index —in this case, a value of RMSEA = 0.046. The analysis also included incremental fit indexes such as the goodness-of-fit index (GFI), which reached a value of 0.951. Another index used was the comparative fit index CFI = .957 (Graph 1). These results indicate that the model has a good fit to reality.

Graph 1

Structural Equation Model of the Satisfaction with Life Questionnaire (QSWL)

Note. The path diagram shows the relationships between the three factors and the items, emphasizing those related to physical aspect (Physical SWL), social (Social SWL), psychological (Psychological SWL).

Finally, we found that the cut-off points were as follows: less than 29 indicate low SWL; from 30 to 38, medium SWL; 39-46, high SWL; and greater than 47, very high SWL.

Discussion

Satisfaction with Life is related to the person's assessment of him or herself, including the physical component related to physical health, less pain, physical functioning, and WB (Kim et al., 2021). Our results show that the items assessing this factor ("I am satisfied with the opportunities to exercise and rest", "I am able to do the physical activities I want to do", "I am satisfied with my physical health", "I am satisfied with my sleep quality", and "I can find the time for everything I want to do"), have a high correlation with SWL and Social Satisfaction. These findings are confirmed by Chen, Wang, Yang, Huang & Fan (An et al., 2019), who found that SWL measured mainly by physical activity and relationships explains as a whole physical health, psychological, and therefore explain WB. Removing the physical component excludes from the assessment, diagnosis and intervention, the physical symptom that in many chronic diseases generates disability, due to chronic pain, acute pain and disability (Vinaccia et al., 2019). This is consistent with findings that relate higher levels of SWL with better indicators of physical health, lower pain sensation, physical limitations-functioning, lower frequency of chronic diseases, and therefore better health perception (Kim et al., 2021).

The items in our instrument "I am able to do the physical activities I want to do" and "I am satisfied with my physical health" probe the individual's perception of his or her physical worth and perceived ability to carry out

their life without physical limitations. The limitation of the present study is the lack of a test-retest measure to measure the temporal stability and reliability of the well-being construct, future research should re-evaluate the associations in this study using data with follow-up times. Another limitation is that the results were obtained only by self-report; future research could pool objective assessments of health outcomes.

On the psychometric side, the reliability coefficient was good, as well as the correlation of items and a significant MKO. The confirmatory analysis also had good incremental fit indexes such as the GFI and the CFI. Our model shows a good theoretical fit in the structural equations that matches the reality perceived by the participants in this study, being a short and easy-to-apply questionnaire in hospital and clinical settings, as well as in epidemiological research related and SWL, the identification of the physical state and the perception that people have of their body and its functionality and discomfort, can broaden the perspective of individual or collective intervention.

A distribution of 15 items was obtained in three factors: Satisfaction with Life, Physical Satisfaction and Social Satisfaction. The Life Satisfaction Questionnaire showed acceptable reliability and convergent validity in the Mexican adult population. Our instrument provides 3 relevant indicators of satisfaction with life compared to the Satisfaction with Life Scale (SWLS) by Diener, which generates an overview of this construct.

References

Abbott, R.A., Ploubidis, G.B., Huppert, F.A. et al. (2006). Psychometric evaluation and predictive validity of Ryff's psychological well-being items in a UK birth cohort sample of women. *Health and Quality of Life Outcomes*, 4, 76. https://doi.org/10.1186/1477-7525-4-76

An, H. Y., Chen, W., Wang, C. W., Yang, H. F., Huang, W. T., & Fan, S. Y. (2020). The Relationships between Physical Activity and Life Satisfaction and Happiness among Young, Middle-Aged, and Older Adults. *International journal of environmental research and public health,* 17(13), 4817. https://doi.org/10.3390/ijerph17134817

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. Journal of personality assessment, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13

Faruk, MO, Alam, F., Chowdhury, K. y Soron, TR. (2021). Validación del Índice de Bienestar Bangla WHO-5. Salud mental global, 8, e26. https://doi.org/10.1017/gmh.2021.26

Kim, E. S., Delaney, S. W., Tay, L., Chen, Y., Diener, E. D., & Vanderweele, T. J. (2021). Life Satisfaction and Subsequent Physical, Behavioral, and Psychosocial Health in Older Adults. The Milbank quarterly, 99(1), 209–239. https://doi.org/10.1111/1468-0009.12497.

Manderscheid, R. W., Ryff, C. D., Freeman, E. J., McKnight-Eily, L. R., Dhingra, S., & Strine, T. W. (2010). Evolving definitions of mental illness and wellness. Preventing chronic disease, 7(1), A19. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2811514/

Moreta, R, López, C, Gordón, P, Ortíz, W, Gaibor, I, Moreta, R. (2018). Satisfacción con la vida, bienestar psicológico y social como predictores de la salud mental en ecuatorianos. *Actualidades en Psicología*, 1;32(124):112–26. https://www.scielo.sa.cr/scielo.php?script=sci_arttext&pid=S2215-35352018000100112

Moreta-Herrera R, López-Calle C., Gordón-Villalba P., Ortíz-Ochoa W., Gaibor-González I. (2018). Satisfaction with Life, Psychological and Social Well-being as Predictors of Mental Health in Ecuadorian. *Actualidades en Psicología*, 32(124), 111-125. https://doi.org/10.15517/ap.v32i124.31989

Organización Mundial de la Salud (2022). *Promoción del Bienestar Mental*. Boletín de Salud mental. http://www.searo.who.int/entity/mental_health/promotion-of-mental-well-being/en/

Pavot, W., & Diener, E. (1993). The affective and cognitive contest of self-reports measures of subjective well-being. *Social Indicators Research*, 28(1), 1-20. https://doi.org/10.1007/BF01086714

Pérez, N., & Alegre, A. (2014). Satisfacción con la vida: predictores y moderadores. En B. Barredo, R. Bisquerra, A. Blanco, N. García Aguilar, N. Pérez-Escoda & A. Tey (Coords.), *I Congrés Internacional d'Educació Emocional. X Jornades d'Educació Emocional*. Barcelona, España: Institut de Ciéncies de l'Educació. Universidad de Barcelona. https://www.researchgate.net/publication/267866379_Satisfaccion_con_la_vida_predictores_y_moderadores#fullTextFileContent

Rau, L. M., Grothus, S., Sommer, A., Grochowska, K., Claus, B. B., Zernikow, B., & Wager, J. (2021). Chronic Pain in Schoolchildren and its Association with Psychological Wellbeing Before and During the COVID-19 Pandemic. *The Journal of adolescent health,* 69(5), 721–728. https://doi.org/10.1016/j.jadohealth.2021.07.027

Sandoval-Valerio AK, Pérez-Vielma NM, Miliar-García Á, Gómez-López M, García-García C, & Aguilera-Sosa VR. (2020). Pensamientos Negativos y Estrés asociados al Receptor de Serotonina 5HT1a en Mujeres con Fibromialgia. *Acta de investigación psicológica*, 10(3), 93-101. https://doi.org/10.22201/fpsi.20074719e.2020.3.361

Tomczyk, S., Altweck, L., & Schmidt, S. (2021) How is the way we spend our time related to psychological wellbeing? A cross-sectional analysis of time-use patterns in the general population and their associations with wellbeing and life satisfaction. *BMC public health*, 21(1), 1858. https://doi.org/10.1186/s12889-021-11712-w

Topp C, W, Østergaard S, D, Søndergaard S, Bech P (2015). The WHO-5 Well-Being Index: A Systematic Review of the Literature. *Psychother Psychosom*, 84:167-176. doi: 10.1159/000376585

Victoria García-Viniegras, & Carmen González Benítez, Idarmis (2000). La categoría bienestar psicológico: Su relación con otras categorías sociales. *Revista Cubana de Medicina General Integral*, 16(6), 586-592. http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-21252000000600010

Vinaccia Alpi S, Parada N, Quiceno JM, Riveros Munévar F, Vera Maldonado LA. (2019). Escala de satisfacción con la vida (SWLS): análisis de validez, confiabilidad y baremos para estudiantes universitarios de Bogotá. Psicogente, 4;22(42):1–20. http://www.scielo.org.co/pdf/psico/v22n42/0124-0137-psico-22-42-00001.pdf

Vus, V. V., Syurina, E. V., Brückner, T., Fradelos, E. C., Papathanasiou, I. V., Omelchenko, L. M., & Vakulich, T. M. (2021). Youth and Mental Health: Life Satisfaction, Wellbeing, and Societal Participation in the Context of a Transitioning State. *Wiadomosci lekarskie*, 74(7), 1687–1694. https://wiadlek.pl/wp-content/uploads/archive/2021/WLek202107123.pdf

Table 1.

Items	Strongly disagree	Disagree	Agree	Strongly Agree
1.- SWL1. I am satisfied with my life.	1	2	3	4
2.- SWL 2. I feel I have a purpose in life.	1	2	3	4
3.- SWL3. I feel optimist about my future.	1	2	3	4
4.- SWL4. I feel depressed or anxious.	1	2	3	4
5.- SWL5. I feel in control of my life.	1	2	3	4
6.- SWL6. I feel capable of facing anything.	1	2	3	4
7.- SWL7. I am mentally alert.	1	2	3	4
8.- SWL8. I can find the time for everything I want to do.	1	2	3	4
9.- SWL9. I am satisfied with my physical health.	1	2	3	4
10.- SWL10. I am satisfied with my sleep quality.	1	2	3	4
11.- SWL11. I am satisfied with my ability to perform daily activities.	1	2	3	4
12.- SWL12. I am satisfied with my ability to work.	1	2	3	4
13.- SWL13. I am satisfied with my physical appearance.	1	2	3	4
14.-SWL14. I am able to do the physical activities I want to do.	1	2	3	4
15.- SWL15. I am satisfied with the opportunities to exercise and rest.	1	2	3	4
16.- SWL16. I am satisfied with my personal and family life.	1	2	3	4
17.- SWL17. I am satisfied with my friendships and personal relationships.	1	2	3	4
18.- SWL18. I am comfortable with the way I relate and connect with others.	1	2	3	4

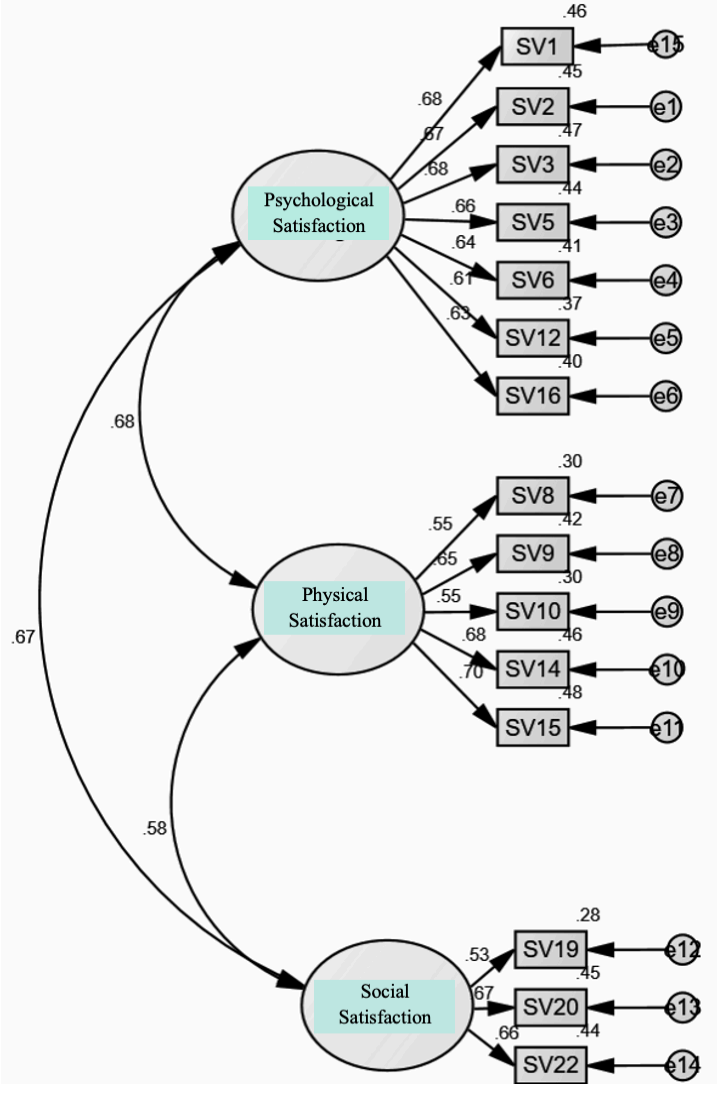
19.- SWL19. I have fun in company of other people.	1	2	3	4
20.- SWL20. I feel able to ask for help if I need it.	1	2	3	4
21.- SWL21. I am satisfied with my sex life.	1	2	3	4
22.- SWL22. I am confident in expressing my opinions and beliefs.	1	2	3	4

Table 2 .

Items	Satisfaction with Life	Physical Satisfaction	Social Satisfaction
1.- SWL2. I feel I have a purpose in life.	0.745		
2.- SWL3. I feel optimist about my future.	0.724		
3.- SWL1. I am satisfied with my life.	0.712		
4.- SWL5. I feel in control of my life.	0.695		
5.- SWL16. I am satisfied with my personal and family life.	0.627		
6.- SWL6. I feel capable of facing anything.	0.582		
7.- SWL12. I am satisfied with my ability to work.	0.509		
8.- SWL15. I am satisfied with the opportunities to exercise and rest.		0.763	
9.- SWL14. I am able to do the physical activities I want to do.			0.744
10.- SWL9. I am satisfied with my physical health.		0.682	
11.- SWL10. I am satisfied with my sleep quality.		0.617	
12.- SWL8. I can find the time for everything I want to do.		0.523	
13.- SWL20. I feel able to ask for help if I need it.			0.781

14.- SWL19. I have fun in company of other people.			0.749
15.- SWL22. I am confident in expressing my opinions and beliefs.			0.623

Figure 1.



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