Behavioral Psychology / Psicología Conductual, Vol. 29, Nº 3, 2021, pp. 721-741
https://doi.org/10.51668/bp.8321312n

DESIGN AND VALIDATION OF THE SELF-CARE BEHAVIORS SCALE

Nissa Yaing Torres Soto[1], Víctor Corral Verdugo[2], Nadia Saraí Corral Frías[2] and María de Lourdes Rojas Armadillo[1]
[1]University of Quintana Roo; [2]University of Sonora (Mexico)

Abstract

Self-care constitutes a series of actions and behavior that contributes to individuals life, health and well-being maintenance and represents a relevant construct in diverse psychological areas. The purpose of this study is to develop the Self-Care Behaviors Scales and evaluate its psychometric properties. The sample included 235 individuals (*M*= 29.11 years, *SD*= 10.53) from northern Mexico. To analyze the structure, a factorial exploratory analysis, revealed the existence of three factors (physical self-care, psychological self-care, spiritual self-care) that would explain 54% of total covariance. A three-factor analysis of covariance allowed adequate goodness-of-fit indices and the calculation of the mean variance extracted. The scale obtained evidence of convergent and discriminant validity. The internal consistency indices of the total score and the subscales were high (between .93 to .96). The significant correlation between these factors with personal variables provided evidence of the concurrent validity of the scale.
KEY WORDS: *self-care behavioral, physical self-care, psychological self-care, spiritual self-care*.

Resumen

El autocuidado constituye un conjunto de acciones y comportamientos que contribuyen a mantener la vida, la salud y el bienestar de los individuos y representa un constructo de relevancia en diversas áreas de la psicología. El propósito del presente estudio fue desarrollar la "Escala de conductas de autocuidado" y evaluar sus propiedades psicométricas. La muestra incluyó a 235 personas (*M*= 29.11 años; *DT*= 10.53) de México, siendo el 61.3% mujeres. Para analizar la estructura de la escala se realizó un análisis factorial exploratorio, que reveló la existencia de tres factores (físico, psicológico y espiritual) que explicaron el 54.18% de la varianza total. Un análisis de covarianzas de tres factores produjo índices de bondad de ajuste adecuados y el cálculo de varianza media extraída. La escala obtuvo evidencias de validez convergente y discriminante. Los índices de consistencia interna de la puntuación total y las subescalas fueron elevados (entre .93 y .96). La correlación significativa entre estos factores con variables personales arrojó pruebas sobre la validez concurrente de la escala.

Correspondence: Nissa Yaing Torres Soto, Medical Sciences Dept., Division of Health Sciences, University of Quintana Roo, Erick Paolo Martínez avenue, 77039 Chetumal, Quintana Roo, México. E-mail: nissa.torres@uqroo.edu.mx

PALABRAS CLAVE: *conductas de autocuidado, autocuidado físico, autocuidado psicológico, autocuidado espiritual.*

Introduction

Self-care behaviors refer to a set of skills that the individual develops to preserve their own life, health, and well-being (Orem, 2001). It constitutes an ethical, moral and conscious commitment that allows for controlling health conditions, regulating human functioning and development (Richard and Shea, 2011). This term has been examined from different disciplinary fields, mostly developed in health literature (Godfrey et al., 2011; Lommi, Matarese, Alvaro, Piredda and De Marinis, 2015). Most studies have focused on evaluating self-care in clinical patients (Gao et al., 2013; Shrivastava, Shrivastava and Ramasamy, 2013), in older adults (Campos-García, Oliver, Tomás, Galiana and Gutiérrez, 2018; Jung, Kim, Bishop, and Hermann, 2019) and in public health professionals (Magno, 2020; Unadkat and Farquahar, 2020). Recently, psychology has examined the role of self-care in promoting well-being and psychological health, particularly in mental health professionals (Dorociak, Rupert, Bryant and Zahniser, 2017; Jiang, Topps and Suzuki, 2020; Posluns and Lynn, 2020). Evidence suggest people who practice self-care behaviors understand that such actions not only bring positive benefits to personal well-being, but also provide prosocial development (altruistic, equitable) and pro-environmental (frugal, pro-ecological) behaviors (Corral-Verdugo, Pato and Torres-Soto, 2021). This literature highlights the importance of studying self-care to elucidate behaviors related to physical and mental health.

Research indicates the existence of a three-dimensional structure of self-care constituted by physical (body), interior (mind) and social (interpersonal relationships) self-care (Campos-García, et al., 2018; Galiana, Oliver, Sansó and Benito, 2015) conversely, from a theoretical perspective, Corral, Caso and Frías (2017) argue that self-care is primarily composed of three dimensions (physical, psychological, and spiritual).

Physical self-care involves a set of skills that are used to improve physical functioning and prevent or control disease. The vital processes of the body require water consumption, access to clean air, health protection, regular medical check-ups, access to health care resources, and the avoidance body harm (Butler, Mercer, McClain-Meeder, Horne and Dudley, 2019; Corral et al., 2017). Maintaining a healthy diet, personal hygiene habits, physical exercise, sleep hygiene and recreational activities are some examples of physical self-care actions (Galiana, Oliver, Sansó and Benito, 2015; Harrison and Westwood 2009; Hernández, 2016).

Psychological self-care includes practices that lead to a better functioning of mental health allowing to face emotional conditions of anguish or alterations in life (Vidal-Blanco, Oliver, Galiana and Sansó, 2019). It represents an essential practice to prevent the mismanagement of stressful situations, exhaustion and personal deterioration (Barnett, Baker, Elman and Schoener, 2007). Previous studies show that the psychological self-care deficit is related to high levels of burnout, symptoms

of stress and a greater risk of deteriorating health (Butler, Carello and Maguin, 2017; Santana and Fouad, 2017).

Spiritual self-care refers to how people relate to their subjectivity, including the belief in relationships with others, the existential connection that is established with a higher entity, and the feeling of being connected to the world (White, Peters and Schim, 2011). This is influenced by dispositions towards spirituality and is useful to motivate people to establish positive and reciprocal relationships with others, rebuild relationships and / or participating as volunteers in mutual help groups (Liu et al., 2008). Spiritual self-care also implies getting in touch with spirituality through the development of activities such as prayer, meditation, mindfulness, yoga and Tai Chi, getting in touch with nature, as well as participating in religious or self-help groups (Puchalski et al., 2019; Steinhorn, Din and Johnson, 2017; White and Myers, 2013; Butler, et al., 2019). It has been documented that participating in spiritual practices brings benefits to physical and mental health, especially in adulthood (Barreto et al., 2015; Koenig, 2018). This can be through its moderating role between occupational stress and emotional exhaustion (Chirico, Sharma, Zaffina and Magnavita, 2020; Rushton, Batcheller, Schroeder and Donohue, 2015).

Self-care appears to have specific advantages in physical health, it also appears to act as a protective factor for psychological well-being. Empirical evidence has demonstrated that physical self-care reduces symptoms of anxiety, stress, pain, depression, and sleep-related problems (Anderson, King, Stewart, Camacho, & Rejeski, 2005; Callaghan, 2004; Gerber, Jonsdottir, Lindwall, and Ahlborg, 2014). Other studies have shown that increasing the frequency of physical exercise has important benefits to mental health, since it helps and prevents mental illnesses and contributes significantly to well-being (Mandolesi et al., 2018) as, optimism represents a significant predictor of physical health (Rasmussen, Scheier, & Greenhouse, 2009).

Currently, there are some measures designed to evaluate self-care practices (Cook-Cottone and Guyker, 2018; Dorociak et al., 2017; Jiang, et al., 2020; Lee, Millller, & Bride, 2020); however, there is a lack of studies that jointly evaluate physical, psychological and spiritual self-care. For this reason, it is pertinent to conduct an empirical verification of the trifactorial structure of self-care. Based on the previous approaches, the objective of this study was to design and validate a scale of self-care behaviors composed of three integrated in a Mexican sample.

Method

Participants

The sample was randomly selected using the formula for known population (confidence coefficient= 1.96; probability of success= .05; margin of error= .05) (Fahim & Negida, 2019). It included 235 participants from a city in northwestern Mexico, whose main characteristics are included in Table 1.

Table 1
Descriptive statistics of the sociodemographic variables of the participants (*N*= 235)

Variable	*n*	%	Variable	*n*	%
Gender			Religion		
Female	144	61.3	Catholic	185	78.7
Male	91	38.7	Christian	16	6.8
Age range			Buddhist	2	0.9
18-29	96	40.9	Jehovism	2	0.9
30-49	55	23.4	Jewish	2	0.9
50-69	84	35.7	Evangelical	3	1.3
Weight (Kg)			Adventist	1	0.4
45-65	97	41.3	Atheist	24	10.2
66-86	93	39.6	Type of disease		
87-107	36	15.3	None	183	77.9
108-128	7	3.0	Obesity	26	11.1
129-150	2	0.9	Arterial Hypertension	5	2.1
Scholarship			Nutritional deficiency	5	2.1
None	9	3.8	Heart disease	5	2.1
Elementary	3	1.3	Diabetes	5	2.1
High school	15	6.4	Arthritis	4	1.7
Technical career	30	12.8	Others	2	0.9
University	135	57.4	Sports activities		
Postgraduate	43	18.3	None	57	24.3
Monthly family income			Once a week	47	20.0
≤ $2, 500	1	4.0	2-3 times a week	68	28.9
$2.501 a $5.000	65	27.7	> 3 times a week	63	26.8
$5.0001 a $1.000	65	27.7	Tobacco		
$1.001 a $2.000	67	28.5	Never	190	80.9
$2.001 a $4.000	5	2.1	Once a week	16	6.8
≥ $4.0001	32	13.6	2-3 times a week	11	4.7
Marital status			> 4 times a week	2	0.9
Married	109	46.4	Everyday	16	6.8
Single	95	40.4	Alcoholic beverages		
Divorced	11	4.7	Never	129	54.9
Free union	20	8.5	Once a week	86	36.6
Medical service			2-3 times a week	17	7.2
INSABI	75	31.9	> 4 times a week	2	0.9
IMSS	73	31.1	Everyday	1	0.4
ISSSTE	64	27.2			
None	23	9.8			

Note: INSABI= *Instituto de Salud para el Bienestar* [Institute of Health for Wellbeing]; IMSS= *Instituto Mexicano del Seguro Social* [Mexican Institute of Social Secure]; ISSSTE= *Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado* [Institute of Social Security and Services for State Employees].

Instruments

a) *Sociodemographic questionnaire ad hoc*. The following sociodemographic data were also collected by the time of instrument application: age, income,

education, body weight, other health concern, consumption of alcohol and tobacco, access to medical services, practice of sporting activities and involvement in religious activities.

b) *Self-Care Behaviors* (CA). scale is made up of 52 items that measures three dimensions of self-care: physical (20 items), psychological (23 items) and spiritual (9 items) of 5 Likert-scale response options (1= never, 2= almost never, 3= occasionally, 4= almost always to 5= always) (see Appendix). This questionnaire initially included 61 items distributed as follows in the three dimensions of self-care: physical (29 items), psychological (23 items) and spiritual (9 items). The self-care behavior scale "Care with yourself" by Corral-Verdugo, et al. (2021) served as a reference. For 18 items answered on a Likert-type scale (0= never to 4= every day). The original scale was applied in a sample like that of the present study, presenting a high Cronbach's alpha (α= .94) and with significant factor loadings between items (p< .05) ranging between .58 and .82 during the optimization of the confirmatory factor analysis (Corral-Verdugo et al., 2021). This evaluates behaviors such as physical exercise, eating healthy foods, promoting positive emotions, maintaining positive relationships with others, and practicing meditation. A first exercise involved expanding the number of original items without losing the theoretical content that supports the construct and self-care classifying behaviors (physical, psychological, and spiritual). For the *Psychological Self-Care* subscale, 11 items were created based on the "Perceived emotional intelligence scale" (Trait Meta-Mood Scale TMMS-24) by Salovey, Mayer, Goldman, Turvey, & Palfai (1995) adapted to Spanish by Fernández-Berrocal, Extremera, & Ramos (2004) that measures meta-knowledge of emotional states through 24 items grouped in three dimensions: attention to emotions (α= .80), emotional clarity (α= .75) and emotional repair (α= .74) and with a Conbach's alpha of .83 for the total scale. The "Spiritual Self-care Practices Scale" was taken as a reference for the subscale of Spiritual Self-Care, eight items were created (White, 2016). For the *Spiritual Self-Care* subscale, the "Spiritual Self-care Practices Scale" (White, 2016) was used as a reference. The scale is composed of 35 items grouped into four dimensions: personal care practices (α= .89) with 14 items that allow actions such as having time for myself, eating healthy foods, feeling at peace and/or at harmony, resting, giving love, following medical orders, maintaining a sense of hope for the future, laughing, forgiveness, finding meaning in life, maintaining positive relationships, asking questions about medical orders and helping other people. The component of Spiritual Practices (α= .85) there are 9 items that include actions such as attending religious services, contributing to a religious group, praying, consulting a spiritual counselor, living a moral life, meditating, contemplating, or reflecting, reading to search for inspiration, repairing broken relationships and resolve conflict resolution. The component of physical spiritual practices (α= .69) is comprised of 5 items that allow for participation in physical activities, giving alms or performing other acts of charity, participating as a volunteer, hiking, and practicing yoga or tai-chi. Finally, in interpersonal spiritual practices (α= .66) with 7 items that analyze the follow-up of a special diet,

friendships, spend time with family and friends, have a meaningful conversation with others and receive love. The internal consistency index (Cronbach's alpha coefficient) for the full scale was high (α= .91), which indicates scale reliability. The selected items for the sub-scale of spiritual self-care were chosen from these domains.

Procedure

The survey was designed using Qualtrics software and shared through social networks and websites. Prior to participation, consent was obtained and participants were informed of the anonymous, confidential and voluntary nature of their involvement and the protection of their. All procedures were approved by the Ethics Committee of the University of Sonora (CEI-UNISON).

Data analysis

The normality of the data was evaluated by testing skewness and kurtosis. Univariate statistics were obtained, and reliability analysis (Cronbach's alpha) was performed using SPSS software version 21. Using this same statistical package, an exploratory factor analysis (EFA) was developed. The principal components analysis was used since it allows to extract a maximum variance for each factor and preserves as much variability as possible (Chen, Chen, & Jin, 2011). Additionally, the Varimax rotation was used, taking as inclusion criteria items with factorial weight $\geq$ .40 (Pituch & Stevens, 2016). The KMO index (Kaiser-Meyer-Olkin measure of sampling adequacy) and Bartlett's test of sphericity (Field, 2013) were tested.

A covariance model was specified and tested, within a confirmatory factor analysis, using the statistical package EQS, to estimate validity (Bentler, 2006). Given the number of items the relatively small sample to estimate structural equation models, three plots were computed for each factor (Hau & Marsh, 2004). The statistical goodness of fit indices used in this model were the chi-square, as well as the practical goodness of fit indices: Bonett of Normed Fit (BBNFI) and the Bentler-Bonett Index of Non-Normed Fit (BBNNFI), in addition to the RMSEA allowing to consider the relevance of the model (O'Boyle & Williams, 2011).

The test of the average variance extracted (AVE) was performed, as well as the square root of average variance extracted (Sqrt AVE) based on the assumptions of Hair, Black, Babin, Anderson, & Tatham (2009), to measure convergent and divergent validity. To calculate the AVE, the factorial weights of each factor (λ) were extracted, squared, added and divided by the total number of indicators. Sqrt AVE was calculated obtaining the square root of the AVE (convergent validity: AVE> .50; divergent validity Sqrt AVE> value of the covariances between the factors) (Henseler, Ringle, & Sinkovics, 2009). Finally, to obtain indicators of concurrent validity, a Pearson correlation matrix was computed to observe the interrelationships between self-care factors and sociodemographic characteristics.

Results

Exploratory factor analysis

The factorial structure presented three dimensions explaining 54.18% of the total variance, with a high index of internal consistency (α= .95). The sample adequacy measure (KMO= .90) and Bartlett's sphericity test were acceptable (14511,12; p< .001). Both values indicated an adequate adjustment of the factorial analysis for the set of items (Table 2). It is important to note that items with λ < .40 were eliminated, resulting in nine items of the physical self-care component (4, 5, 9, 11, 17, 18, 19, 22, 28) being eliminated. This resulted in a total of 52 items for the final self-care scale, divided into three subscales (physical self-care= 2, psychological self-care= 23, spiritual self-care= 9). The communality statistics (η^2) were higher than .50 (or 67%), which demonstrated that the factorial solution managed to explain high proportions of variance for each item subjected to validation.

Table 2
Means, standard deviations, rotated factor saturations and communalities (η^2) for the items of the self-care factors

Ítems	*M*	*SD*	Factor saturations			η^2
			1	2	3	
1. I do some kind of physical activity.	3.64	0.80	**.795**	.013	.018	.633
2. I try to eat healthy foods.	3.80	0.82	**.828**	.179	-.002	.718
3. I use to alternate the position of my body throughout the day to preserve my health.	3.77	0.79	**.775**	.046	.034	.604
6. I frequently examine my body to see if there are any changes.	3.78	0.80	**.873**	.113	.052	.777
7. I moderate the use of salt in my diet.	3.69	0.96	**.745**	.044	.077	.563
8. I get enough sleep to feel rested.	3.68	0.95	**.761**	.036	.088	.589
10. I make changes in my eating habits to keep control of my weight	3.77	0.93	**.736**	.081	.060	.551
12. I make changes to my bad habits to maintain my health.	3.82	0.81	**.783**	.141	-.009	.633
13. I attend periodic medical check-ups to maintain my health.	3.78	0.83	**.830**	.122	-.002	.704
14. Before taking a medicine, I get all the information about the harmful effects on my health.	3.80	0.83	**.833**	.131	-.004	.711
15. I try not to self-medicate when I have pain or illness.	3.71	0.86	**.827**	.094	.083	.700
16. I make changes in my habits to maintain my weight.	3.83	0.97	**.719**	.140	-.011	.536
20. I maintain personal hygiene practices every day (dental hygiene, hand washing, bathing, cutting nails, etc.).	3.87	0.88	**.813**	.079	.110	.679
21. I try to brush my teeth three times a day.	3.98	0.87	**.801**	.075	.113	.660

Ítems	*M*	*SD*	Factor saturations			η^2
			1	2	3	
23. I try to bathe daily.	4.12	0.87	**.668**	.043	.149	.470
24. I keep my nails short and clean.	3.94	0.85	**.715**	.096	.021	.520
25. I rest to regain my health and energy.	4.00	0.87	**.757**	.101	.100	.593
26. I consume at least three meals a day (breakfast, lunch and dinner).	4.02	0.86	**.646**	.100	.128	.444
27. I eat a balanced diet to maintain my health.	3.92	0.90	**.708**	.031	.088	.510
29. I avoid consuming foods that harm my health (fats, salts, sausages, sweets, soda, etc.).	3.96	0.92	**.750**	.133	.070	.585
30. I usually worry a lot about how I feel.	3.81	1.00	.074	**.614**	-.015	.383
31. I usually spend time thinking about my emotions.	3.77	1.07	.077	**.639**	-.012	.414
32. I often think about my feelings.	3.81	1.06	.048	**.596**	.043	.360
33. I think my emotions and mood are worth paying attention to.	4.17	0.95	.003	**.625**	.065	.394
34. I try to be in a good mood.	4.20	0.87	.012	**.668**	.092	.454
35. When I am sad, I think of all the pleasures in life.	3.54	1.15	.089	**.534**	.159	.318
36. Although sometimes I feel sad, I usually have an optimistic vision.	3.98	0.98	.058	**.531**	.187	.320
37. I do activities to rest from daily worries (read a book, do sports, go for a run, among others).	3.93	1.02	.085	**.616**	.030	.387
38. I take the time to do things that I like.	4.09	0.90	.088	**.678**	.047	.469
39. I try to maintain a balance between my body, my emotions and my mind.	3.90	0.90	.232	**.731**	.168	.616
40. I participate in activities that help me to be a better person.	3.92	0.96	.160	**.649**	.248	.508
41. I do activities that generate well-being.	3.96	0.90	.140	**.748**	.097	.588
42. I try to get to know myself better every day.	3.97	0.97	.113	**.732**	.162	.575
43. I do things that give me pleasure.	4.07	0.87	.161	**.765**	.021	.612
44. I enjoy maintaining healthy relationships with others.	4.49	0.67	.001	**.524**	.059	.278
45. Every day I try to be at peace with myself.	4.29	0.83	-.016	**.686**	.138	.490
46. After work (or study) I try to reward myself with any pleasant activity.	4.05	0.96	.033	**.628**	.127	.412
47. When I perceive that I am stressed, I try to think of other things.	3.80	1.00	.016	**.538**	.152	.313
48. Even if I feel bad, I try to think of pleasant things.	3.94	0.93	-.002	**.625**	.146	.412
49. I try to think positive thoughts, even if I feel bad.	4.03	0.97	.008	**.549**	.220	.349
50. I am aware of my feelings in different situations.	4.20	0.79	-.043	**.693**	.061	.485
51. I know well how I feel.	4.04	0.90	.101	**.733**	.057	.550
52. To keep my mind relaxed and calm, I do activities that help me feel better.	4.02	0.90	.130	**.701**	.164	.535
53. I experience satisfaction after meditating.	2.91	1.35	.075	.236	**.668**	.508

Ítems	*M*	*SD*	Factor saturations			η^2
			1	2	3	
54. I turn to meditation to find inner peace and strength.	2.97	1.35	.055	.252	**.583**	.406
55. I practice spiritual activities to find harmony with the world.	2.86	1.37	.036	.255	**.730**	.600
56. I feel connected to a being greater than myself (God).	3.48	1.40	.083	.137	**.799**	.665
57. I practice spiritual practices to maintain my health (yoga, tai chi, meditation, praying, biblical coexistence groups, reading spiritual texts, etc).	2.79	1.41	.041	.169	**.756**	.602
58. My relationship with a higher being (God) helps me to love others.	3.51	1.34	.088	.062	**.886**	.797
59. I have learned to forgive other people.	3.57	1.30	.097	.060	**.869**	.768
60. I have learned to forgive myself.	3.60	1.30	.084	.079	**.873**	.776
61. I seek comfort through spiritual means (prayer, meditation, attending religious or spiritual services, or taking spiritual counseling).	3.08	1.45	.072	.188	**.784**	.655

Note: Factor 1= Physical self-care; Factor 2= Psychological self-care; Factor 3= Spiritual self-care.

Factor 1 referred to as Physical self-care was made up of 20 items that consist of personal care actions that people do to take care of their bodies. This factor presented 28.33% of the total explained variance and its level of internal consistency (Cronbach's alpha) was high of .96. Factor 2, named psychological self-care, was made up of 23 items that refer to the perception that people have regarding emotional regulation and personal satisfaction. This factor presented 16.89% of total explained variance and its level of internal consistency (Cronbach's alpha) was high at .94. Finally, factor 3, called Spiritual self-care, was made up of 9 items referring to the inner peace that a person maintains by being connected with their spirit, body and soul. This factor explains 8.95% of the total variance and its level of internal consistency (Cronbach's alpha) was high of .93.

Physical self-care was correlated in a moderately low and significant way with psychological self-care (*r*= .23), while psychological self-care was positively, moderately, and significantly related to spiritual self-care (*r*= .35); the association between physical self-care and spiritual self-care was low but, significant (*r*= .18). Inversely, age and income were positively associated with each subscale, while body weight was negatively associated with physical self-care only. Having health care services, practicing some kind of sporting activity, access to health services and being religious were positively related to the three dimensions. Living with some kind of disease and, the consumption of tobacco and alcohol were negatively and significantly associated with the three behaviors. Finally, scholarship was not related to any type of self-care behavior (Table 3).

Table 3
Correlation matrix between sociodemographic and self-care characteristics

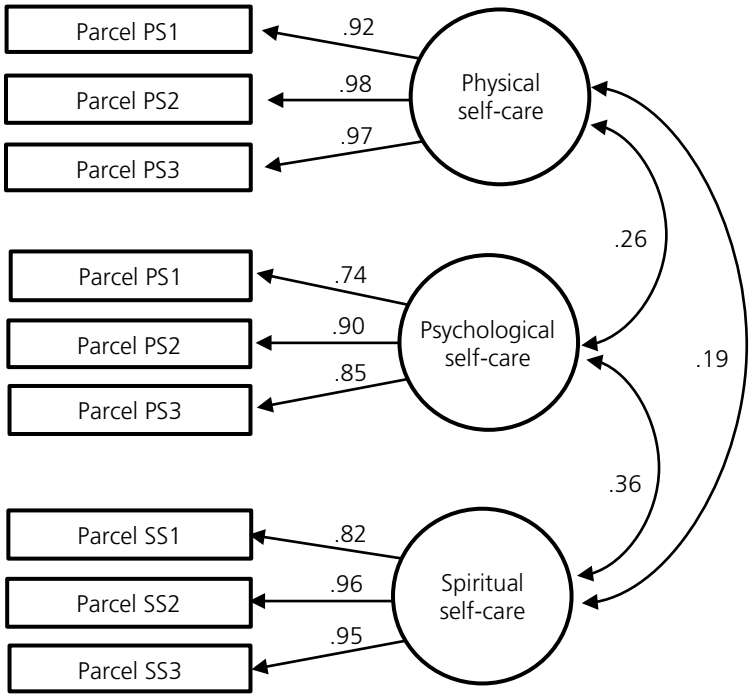
Variables	Physical self-care	Psychological Self-care	Spiritual Self-care
Physical self-care	1		
Psychological Self-care	.23**	1	
Spiritual Self-care	.18**	.35**	1
Age	.16*	.51**	.75**
Weight	-.13*	-.12	-.11
Scholarship	.11	.03	-.01
Income	.20**	.20**	.15*
Ilness or disease	-.20**	-.24**	-.33**
Medical assistance	.23**	.28**	.22**
Sports activities	.21**	.22**	.32**
Medical service	.22**	.30**	.24**
Religion	.20**	.24**	.36**
Tobacco	-.22**	-.36**	-.35**
Alcohol	-.21**	-.27**	-.32**

Note: *p< .05; **p< .01.

Figure 1 shows the results of the model in which the factors of physical self-care, psychological self-care and spiritual self-care emerge in a coherent way from the high and significant relationships between their indicators (parcels). The three covariances were significant (p< .05). Regarding the goodness of fit indicators of the model, the χ^2 was not significant ($\chi^2_{[24]}$ = 35.28; p >.05) and the practical indicators (BBNFI= .98; BBNNFI= .99; CFI= .99) as well as the RMSEA= .04 indicate that the theoretical model adequately fits the empirical data.

Figure 1

Covariance model of self-care factors



Notes: AF= Physical self-care, AP= Psychological self-care, AE= Spiritual self-care

The lambdas of the three self-care factors were acceptable (.74< λ< .98). The AVE of each subscale were greater than .50 and the difference between Sqrt AVE and the covariances were positive. Therefore, in the model of self-care factors they suggest both convergent and divergent validity (Tables 4 and 5).

Table 4

Average variance extracted (AVE) and square root of average variance extracted for self-care scales

Self-care scales	AVE	Sqrt AVE
Physical Self-care	.91	.95
Psychological Self-care	.69	.83
Spiritual Self-care	.83	.91

Note: AVE: average variance extracted; Sqrt AVE: square root of average variance extracted

Table 5
Difference between the square root of average variance extracted and covariances for the self-care scales

Self-care scales	Difference Sqrt AVE - covariance
Physical self-care – Psychological self-care	.698
Physical self-care – Spiritual self-care	.770
Psychological Self-care - Physical Self-care	.698
Psychological Self-care - Spiritual Self-care	.471
Spiritual Self-care - Physical Self-care	.728
Spiritual Self-care - Psychological Self-care	.551

Note: Sqrt AVE: square root of average variance extracted

Discussion

The results of the present study demonstrate that the "Self-Care Behavior Scale" (CA) exhibited adequate psychometric properties. Its factorial structure revealed the existence of three factors, called physical, psychological and spiritual self-care, presenting acceptable internal consistency indices for both the total instrument and the subscales. The statistics showed that the instrument evaluates a congruent construct. The full self-care scale demonstrates high internal consistency. Likewise, the confirmatory factor analysis has high lambda values indicating convergent construct validity. The scale also demonstrated discriminant validity between the three dimensions of self-care. The covariances between the factors were lower than the lambdas values between the factors and their indicators, which is considered evidence of divergent validity (Corral & Figueredo, 1999). The values of the average variance extracted (AVE) and the square root of average variance extracted (Sqrt AVE) corroborated the presumption of convergent and divergent validity of the self-care measure.

As predicted, the self-care factors were positively and significantly correlated with each other. Despite the lack of studies in this area, some studies report that people who practice physical self-care behaviors understand that these actions allow them to positively impact their emotional and spiritual health (Lustyk, Widman, Paschane, & Olson, 2004; White & Myers, 2013). It is worth mentioning that those people who maintain physical care practices have greater emotional regulation skills and better skills to handle stressful and exhausting situations (Anderson et al., 2005; Callaghan, 2004; Sansó et al., 2015). These results, in congruence with the literature, suggest that taking care of oneself physically is related to improvements in emotional and spiritual aspects.

On the other hand, emotional self-care can have a positive influence on practices that impact physical health. Some studies maintain that the greater self-awareness and personal satisfaction, the greater the deployment of physical activities that positively affect people's health and well-being (Babakhani, 2011). In this way, it is evident that psychological self-care is an essential requirement for people to be able to assume healthy lifestyle habits and maintain good physical health.

Our findings showed a higher association between psychological self-care and spiritual self-care in congruence with results presented by Bloomquist, Wood, Friedmeyer-Trainor, and Kim (2015). A person who has learned to self-regulate their emotions has a greater awareness of their own human needs and a greater capacity to maintain and promote spiritual actions (Myers et al., 2012). Previous research has shown that self-awareness has a direct effect on emotional regulation, and this, in turn, positively impacts spiritual self-care and well-being (Richards, Campenni, & Muse-Burke, 2010). It has been found that this relationship works reciprocally, since mindfulness can have a positive effect on psychological self-care (Brown & Ryan, 2003) and contributes to the general well-being of people, acting as a protective factor of physical, mental and emotional health (Valiente-Barroso, Sáiz-Obeso, & Martínez-Vicente, 2021). Likewise, people with good emotional self-regulation have greater possibilities of taking care of their spirituality through actions such as meditation, yoga, inner peace, among others (White & Myers, 2013). These actions positively impact physical and emotional health (Parsian & Dunning, 2009). The above suggests a health model with organic, emotional and spiritual implications.

Consistent with research that shows lower levels of healthy practices in the young population, our results produced a positive correlation between age and self-care (Fortuna, Robbins, & Halterman, 2009). Economic income also had a negative relationship, suggesting that a better economic affluence results in better access to services (i.e., doctors, gym, nutrition). These findings have been documented in previous research positing that income conditions self-care behaviors (Walker, Gebregziabher, Martin-Harris, & Egede, 2014; Yee, McGuire, Taylor, Niznik, & Simon, 2015). Similar to previous research, individuals who suffer from illness and/or consume harmful substances were negatively correlated with individual self-care (Rodríguez-Muñoz, Carmona-Torres, & Rodríguez-Borrego, 2020).

The literature supports that religious practice and spirituality can increase self-care practices (Heidari, Rezaei, Sajadi, Ajorpaz, & Koenig, 2017; Sharif Nia et al., 2017) and physical and mental health (Goudarzian et al., 2019; Koenig, 2015). In the same way, systematic research supports the argument that religious and spiritual participation has positive effects on emotional health (Koenig, 2009), since it contributes to well-being, personal flourishing and prosperity (Park & Slattery, 2013). Additionally, religiosity is related to physical activity, a balanced diet, safe sexual practices and a lower consumption of harmful substances (Jim et al., 2015; Koenig, 2015; Koenig, 2012). All these results highlight the importance of educating the population to maintain self-care practices in a conscious and reasoned way, not only to improve health and prevent diseases, but also to positively impact well-being. This is especially relevant given the current proliferation of conditions of chronic degenerative diseases and communicable infections.

The present study has some limitations. Self-care was evaluated through self-report, a technique subject to a certain degree of subjectivity and social desirability. Although the use of alternative measures is more complex and less convenient, future studies could use alternative methods. This could include the implementation of specific self-care strategies, through an experimental design to make comparisons with controlled groups. It would be advisable to develop longitudinal studies to evaluate the stability and fit of the self-care model. Another limitation is that the

scale was applied during the initial months of the Covid-19 pandemic, which could represent a possible exacerbation of self-care behaviors. Finally, this study was conducted on a sample from northwestern Mexico, which makes it difficult to generalize the results to other Mexican or Latin American contexts. Further studies are needed in a wide variety of sociocultural contexts.

Despite these limitations, this research provides an important contribution to the study of self-care behavior and its association with health and wellbeing. All three dimensions could be used for future research, education, and public policy efforts, which in turn would benefit wellness and health holistically. In the case of this study, we focused on studying self-care in a general sample from a Mexican city; however, a suggestion for future studies would be to examine this construct in specific or vulnerable populations, such as analyzing the elderly population. This scale could be applied in the field of public health and examine populations with some type of disease to determine if the dimensions of self-care can mitigate the ravages of disease and improve well-being.

References

Anderson, R. T., King, A., Stewart, A. L., Camacho, F., & Rejeski, W. J. (2005). Physical activity counseling in primary care and patient well-being: Do patients benefit? *Annals of Behavioral Medicine, 30*, 146-154. doi: 10.1207/s15324796abm3002_7

Barnett, J. E., Baker, E. K., Elman, N. S., & Schoener, G. R. (2007). In pursuit of wellness: The self-care imperative. *Professional Psychology: Research and Practice, 38*, 603-612. doi: https://doi.org/10.1037/0735-7028.38.6.603

Barreto, P., Fombuena, M., Diego, R., Galiana, L., Oliver, A., & Benito, E. (2015). Bienestar emocional y espiritualidad al final de la vida [Emotional well-being and spirituality at the end of life]. *Medicina Paliativa*, *22*, 25-32. doi: 10.1016/j.medipa.2013.02.002

Bentler, P. M. (2006). *EQS: Structural equations program manual* (6th Ed.). Encino, CA: Multivariate Software.

Bloomquist, K. R., Wood, L., Friedmeyer-Trainor, K., & Kim, H. W. (2015). Self-care and professional quality of life: Predictive factors among MSW practitioners. *Advances in Social Work*, *16*, 292-311. doi: 10.18060/18760

Butler, L. D., Carello, J., & Maguin, E. (2017). Trauma, stress, and self-care in clinical training: Predictors of burnout, decline in health status, secondary traumatic stress symptoms, and compassion satisfaction. *Psychological Trauma: Theory, Research, Practice, and Policy, 9*, 416-424. doi: 10.1037/tra0000187

Butler, L. D., Mercer, K. A., McClain-Meeder, K., Horne, D. M., & Dudley, M. (2019). Six domains of self-care: Atending to the whole person. *Journal of Human Behavior in the Social Environment, 29*, 107-124. doi: 10.1080/10911359.2018.1482483

Callaghan, P. (2004). Exercise: A neglected intervention in mental health care? *Journal of Psychiatric and Mental Health Nursing*, *H*, 476-483. doi: 10.1111/j.1365-2850.2004.00751.x

Campos-García, A., Oliver, A., Tomás, J. M., Galiana, L., & Gutiérrez, M. (2018). Self-care: New evidence for its measurement in older adults. *Revista Española de Geriatría y Gerontología*, *53*, 326-331. doi: 10.1016/j.regg.2018.01.010

Chirico, F., Sharma, M., Zaffina, S., & Magnavita, N. (2020). Spirituality and prayer on teacher stress and burnout in an Italian cohort: A pilot, before-after controlled study. *Frontiers in Psychology*, *10*, 1-7. doi: 10.3389/fpsyg.2019.02933

Cook-Cottone, C. P., & Guyker, W. M. (2018). The development and validation of the Mindful Self-Care Scale (MSCS): An assessment of practices that support positive embodiment. *Mindfulness, 9*, 161-175. doi: 10.1007/s12671-017-0759-1

Corral, V., & Figueredo, A. J. (1999). Convergent and divergent validity of three measures of conservation behavior: The multitrait-multimethod approach. *Environment & Behavior*, *31*, 805-820. doi: 10.1177/00139169921972353

Corral, V., Caso, J., & Frías, M. (dirs.) (2017). *Psicología del cambio climático. Mitigación y adaptación conductual ante el calentamiento global* [Psychology of climate change. Mitigation and behavioral adaptation to global warming] (1st Ed.). Mexico: Pearson.

Corral-Verdugo, V., Pato, C., & Torres-Soto, N. (2021). Testing a tridimensional model of sustainable behavior: Self-care, caring for others, and caring for the planet. *Environment, Development and Sustainability*, 1-16. doi: 10.1007/s10668-020-01189-9

Dorociak, K. E., Rupert, P. A., Bryant, F. B., & Zahniser, E. (2017). Development of the Professional Self-Care Scale. *Journal of Counseling Psychology, 64*, 325-334. doi: 10.1037/cou0000206

Fahim, N. K., & Negida, A. (2019). Sample size calculation guide-part 2: How to calculate the sample size for an independent cohort study. *Advanced Journal of Emergency Medicine*, *3*, 1-2. doi: 10.22114/AJEM.v0i0.104s

Fernández-Berrocal, P., Extremera, N., & Ramos, N. (2004). Validity and reliability of the Spanish modified version of the Trait Meta-Mood Scale. *Psychological Reports*, *94*(3), 751-755. doi: 10.2466/pr0.94.3.751-755

Field, A. (dir.) (2013). *Discovering statistics using IBM SPSS statistics*. (4ª ed.) Londres: Sage.

Fortuna, R. J., Robbins, B. W. y Halterman, J. S. (2009). Ambulatory care among young adults in the United States. *Annals of Internal Medicine*, *151*, 379-385. doi: 10.7326/0003-4819-151-6-200909150-00002

Galiana, L., Oliver, A., Sansó, N., & Benito, E. (2015). Validation of a new instrument for self-care in Spanish palliative care professionals nationwide. *The Spanish Journal of Psychology*, *18*, 1-9. doi: 10.1017/SJP.2015.71

Gao, J., Wang, J., Zheng, P., Haardörfer, R., Kegler, M. C., Zhu, Y., & Fu, H. (2013). Effects of self-care, self-efficacy, social support on glycemic control in adults with type 2 diabetes. *BMC Family Practice*, *14*, 1-6. doi: 10.1186/1471-2296-14-66

Gerber, M., Jonsdottir, I. H., Lindwall, M., & Ahlborg, G. (2014). Physical activity in employees with differing occupational stress and mental health profiles: A latent profile analysis. *Psychology of Sport and Exercise. 15*, 649-658. doi: 10.1016/j.psychsport.2014.07.012

Godfrey, C. M., Harrison, M. B., Lysaght, R., Lamb, M., Graham, I. D., & Oakley, P. (2011). Care of self-care by other-care of other: The meaning of self-care from research, practice, policy and industry perspectives. *International Journal of Evidence-Based Healthcare*, *9*, 3-24. doi: 10.1111/j.1744-1609.2010.00196.x

Goudarzian, A. H., Boyle, C., Beik, S., Jafari, A., Nesami, M. B., Taebi, M., & Zamani, F. (2019). Self-care in Iranian cancer patients: The role of religious coping. *Journal of Religion and Health*, *58*(1), 259-270. doi: 10.1007/s10943-018-0647-6

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Análise multivariada de dados* [Multivariate analysis of data] (6th Ed.). Porto Alegre, Brazil: Bookman.

Harrison, R. L., & Westwood, M. J. (2009). Preventing vicarious traumatization of mental health therapists: Identifying protective practices. *Psychotherapy: Theory, Research, Practice, Training*, *46*(2), 203-219. doi:10.1037/a0016081

Hau, K. T., & Marsh, H. W. (2004). The use of item parcels in structural equation modelling: Non-normal data and small sample sizes. *British Journal of Mathematical and Statistical Psychology*, *57*(2), 327-351. doi:10.1111/j.2044-8317.2004.tb00142.x

Heidari, S., Rezaei, M., Sajadi, M., Ajorpaz, N. M., & Koenig, H. G. (2017). Religious practices and self-care in Iranian patients with type 2 diabetes. *Journal of Religion and Health*, *56*(2), 683-696. doi: 10.1007/s10943-016-0320-x

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In R. R. Sinkovics, & P. N. Ghauri (Eds.), *Advances in international marketing* (pp. 277-319). Bingley: Emerald. doi: 10.1108/S1474-7979(2009)0000020014

Hernández, M. R. (2016). Autocuidado y promoción de la salud en el ámbito laboral [Self-care and health promotion in the workplace]. *Revista Salud Bosque*, *5*(2), 79-88. doi: 10.18270/rsb.v5i2.1468

Jiang, X., Topps, A. K., & Suzuki, R. (2020). A systematic review of self-care measures for professionals and trainees. *Training and Education in Professional Psychology.* Advance online publication. doi: 10.1037/tep0000318

Jim, H. S. L., Pustejovsky, J. E., Park, C. L., Danhauer, S. C., Sherman, A. C., Fitchett, G., Merluzzi, T. V. Munoz, A. R., Georg, L., Snyder, M., & Salsman, J. M. (2015). *Religion, spirituality, and physical health in cancer patients: A meta-analysis. Cancer, 121*(21), 3760-3768. doi: 10.1002/cncr.29353

Jung, S. E., Kim, S., Bishop, A., & Hermann, J. (2019). Poor nutritional status among low-income older adults: Examining the interconnection between self-care capacity, food insecurity, and depression. *Journal of the Academy of Nutrition and Dietetics*, *119*(10), 1687-1694. doi: 10.1016/j.jand.2018.04.009

Koenig, H. G. (2009). Research on religion, spirituality, and mental health: A review. *The Canadian Journal of Psychiatry*, *54*(5), 283-291. doi: 10.1177/070674370905400502

Koenig, H. G. (2012). Religion, spirituality, and health: The research and clinical implications. *ISRN Psychiatry*, 1-33. doi: 10.5402/2012/278730

Koenig, H. G. (2015). Religion, spirituality, and health: A review and update. *Advances in mind-body Medicine*, *29*(3), 19-26.

Koenig, H. G. (2018). Religion and mental health: research and clinical applications. Nueva York, NY: Academic.

Lee, J. J., Miller, S. E., & Bride, B. E. (2020). Development and initial validation of the Self-Care Practices Scale. *Social Work*, *65*(1), 21-28. doi: 10.1093/sw/swz045

Liu, C. J., Hsiung, P. C., Chang, K. J., Liu, Y. F., Wang, K. C., Hsiao, F. H., Ng S. M., & Chan, C. L. (2008). A study on the efficacy of body-mind-spirit group therapy for patients with breast cancer. *Journal of Clinical Nursing*, *17*(19), 2539-2549. doi: 10.1111/j.1365-2702.2008.02296.x

Lommi, M., Matarese, M., Alvaro, R., Piredda, M., & De Marinis, M. G. (2015). L'evoluzione del concetto di cura di sé nell'assistenza sanitaria: Una revisione narrativa della letteratura [The evolution of the concept of self-care in the healthcare system: A narrative literature review]. *Professioni Infermieristiche*, *68*(2), 155-166. doi: 10.7429/pi.2015.682155

Lustyk, M. K. B., Widman, L., Paschane, A. A. E., & Olson, K. C. (2004). Physical activity and quality of life: Assessing the influence of activity frequency, intensity, volume, and motive. *Behavioral Medicine*, *30,* 124-131. doi: 10.3200/BMED.30.3.124-132

Magno, S. (2020). Self-care for health professionals. *Recenti Progressi in Medicina*, *111*(4), 205-206. doi: 10.1701/3347.33182

Mandolesi, L., Polverino, A., Montuori, S., Foti, F., Ferraioli, G., Sorrentino, P., & Sorrentino, G. (2018). Effects of physical exercise on cognitive functioning and wellbeing: Biological and psychological benefits. *Frontiers in Psychology*, *9*, 1-11. doi: 10.3389/fpsyg.2018.00509

Myers, S. B., Sweeney, A. C., Popick, V., Wesley, K., Bordfeld, A., & Fingerhut, R. (2012). Self-care practices and perceived stress levels among psychology graduate students. *Training and Education in Professional Psychology, 6*(1), 55-66. doi: 10.1037/a0026534

O'Boyle, E. H., & Williams, L. J. (2011). Decomposing model fi t: Measurement vs. theory in organizational research using latent variables. *Journal of Applied Psychology*, *96*(1), 1-12. doi: 10.1037/a0020539

Orem, D. E. (dir.) (2001). *Nursing concepts of practice* (6ª ed.). St. Louis, MO: Mosby.

Park, C. L., & Slattery, J. M. (2013). Religion, spirituality, and mental health. In R. F. Paloutzian, & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (vol. 2; pp. 540 -559). Nueva York, NY: Guilford.

Parsian, N., & Dunning, T. (2009). Developing and validating a questionnaire to measure spirituality: A psychometric process. *Global Journal of Health Science, 1*(1), 2-11. doi:10.5539/gjhs.v1n1p2

Pato, C., & Corral, V. (2014, octubre 8-10). *Conduta sustentável: Autocuidado, cuidado com os outros e com o planeta* [Sustainable behavior: Self-care, caring for others and the planet] [comunicación oral]. I Congresso Brasileiro de Psicologia Positiva, Porto Alegre, Brasil.

Pituch, K. A., & Stevens, J. P. (dirs.) (2016). *Applied multivariate statistics for the social sciences: Analyses with SAS and IBM's SPSS* (6ª ed.). Nueva York, NY: Routledge.

Posluns, K., & Lynn, T. (2020). Dear mental health practitioners, take care of yourselves: A literature review on self-care. *International Journal for the Advancement of Counselling*, *42*(1), 1-20. doi: 10.1007/s10447-019-09382-w

Puchalski, C. M., Sbrana, A., Ferrell, B., Jafari, N., King, S., Balboni, T., Miccinesi, G., Vandenhoeck, A., Silbermann, M., Balducci, L., Yong, J., Antonuzzo, A., Falcone, A., & Ripamonti, C. I. (2019). Interprofessional spiritual care in oncology: A literature review. *ESMO Open, 4*(1), 1-12. doi: 10.1136/esmoopen-2018-000465.

Rasmussen, H. N., Scheier, M. F., & Greenhouse, J. B. (2009). Optimism and physical health: A meta-analytic review. *Annals of Behavioral Medicine*, *37*(3), 239-256. doi: 10.1007/s12160-009-9111-x

Richard, A. A., & Shea, K. (2011). Delineation of self-care and associated concepts. *Journal of Nursing Scholarship*, *43*(3), 255-264. doi: 10.1111/j.1547-5069.2011.01404.x

Richards, K., Campenni, C., & Muse-Burke, J. (2010). Self-care and well-being in mental health professionals: The mediating effects of self-awareness and mindfulness. *Journal of Mental Health Counseling*, *32*(3), 247-264. doi: 10.17744/mehc.32.3.0n31v88304423806

Rodríguez-Muñoz, P. M., Carmona-Torres, J. M., & Rodríguez-Borrego, M. A. (2020). Influence of tobacco, alcohol consumption, eating habits and physical activity in nursing students. *Revista Latino-Americana de Enfermagem*, *28*, 2-9. doi: 10.1590/1518-8345.3198.3230

Rushton, C. H., Batcheller, J., Schroeder, K., & Donohue, P. (2015). Burnout and resilience among nurses practicing in high-intensity settings. *American Journal of Critical Care*, *24*(5), 412-421. doi: 10.4037/ajcc2015291

Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, & health* (pp. 125-154). Washington, DC: American Psychological Association.

Sansó, N., Galiana, L., Oliver, A., Pascual, A., Sinclair, S., & Benito, E. (2015). Palliative care professionals' inner life: Exploring the relationships among awareness, self-care, and compassion satisfaction and fatigue, burnout, and coping with death. *Journal of Pain and Symptom Management*, *50*(2), 200-207. doi: 10.1016/j.jpainsymman.2015.02.013

Santana, M. C., & Fouad, N. A. (2017). Development and validation of a Self-Care Behavior Inventory. *Training and Education in Professional Psychology, 11*(3), 140-145. doi: 10.1037/tep0000142

Sharif Nia, H., Pahlevan Sharif, S., Goudarzian, A. H., Allen, K. A., Jamali, S., & Heydari Gorji, M. A. (2017). The relationship between religious coping and self-care behaviors in Iranian medical students. *Journal of Religion and Health*, *56*(6), 2109-2117. doi: 10.1007/s10943-017-0376-2

Shrivastava, S. R., Shrivastava, P. S., & Ramasamy, J. (2013). Role of self-care in management of diabetes mellitus. *Journal of diabetes y Metabolic Disorders*, *12*(1), 14, 2-5. doi: 10.1186/2251-6581-12-14

Steinhorn, D. M., Din, J., & Johnson, A. (2017). Healing, spirituality, and integrative medicine. *Annal Palliative Medicine, 6*, 237-247. doi: 10.21037/apm.2017.05.01

Unadkat, S., & Farquhar, M. (2020). Doctors' wellbeing: self-care during the covid-19 pandemic. *British Medical Journal*, *368,* 1-2. doi: 10.1136/bmj.m1150

Valiente-Barroso, C., Sáiz-Obeso, J., & Martínez-Vicente, M. (2021). Satisfacción vital y sintomatología prefrontal como predictores de la atención plena disposicional en la mujer rural[Vital satisfaction and prefrontal symptoms as predictors of dispositional mindfulness in rural women]. *Behavioral Psychology/Psicología Conductual*, *29*(2), 489-503. doi: https://doi.org/10.51668/bp.8321215s

Vidal-Blanco, G., Oliver, A., Galiana, L., & Sansó, N. (2019). Quality of work life and self-care in nursing staff with high emotional demand. *Enfermería Clínica*, *29*(3), 186-194. doi: 10.1016/j.enfcle.2018.10.001

Walker, R. J., Gebregziabher, M., Martin-Harris, B., & Egede, L. E. (2014). Independent effects of socioeconomic and psychological social determinants of health on self-care and outcomes in Type 2 diabetes. *General Hospital Psychiatry, 36*(6), 662-668. doi: 10.1016/j.genhosppsych.2014.06.011

White, M. L. (2016). Spirituality self-care practices as a mediator between quality of life and depression. *Religions*, *7*(5), 54, 1-10. doi: 10.3390/rel7050054

White, M. L., & Myers, S. (2013). Development of a spiritual self-care practice scale. *Journal of Nursing Measurement*, *21*(3), 450-462. doi: 10.1891/1061-3749.21.3.450

White, M. L., Peters, R., & Schim, S. M. (2011). Spirituality and spiritual self-care. *Nursing Science Quarterly, 24*(1), *48-56.* doi: 10.1177/0894318410389059

Yee, L. M., McGuire, J. M., Taylor, S. M., Niznik, C. M., & Simon, M. A. (2015). Factors promoting diabetes self-care among low-income, minority pregnant women. *Journal of Perinatology, 36*(1), 13-18. doi: 10.1038/jp.2015.134

RECEIVED: August 22, 2020
ACCEPTED: April 3, 2021

Appendix

The Self-Care Behavior Scale

(Torres, Corral, & Corral, 2021)

Select the answer with which you most feel identified by crossing out with an "X". We remind you that there are no correct or incorrect answers, only declare your opinion of the statements presented below.

Ítems	Never	Almost never	Occasionally	Almost always	Always
1. I do some kind of physical activity.					
2. I try to eat healthy foods.					
3. I use to alternate the position of my body throughout the day to preserve my health.					
4. I frequently examine my body to see if there are any changes.					
5. I moderate the use of salt in my diet.					
6. I get enough sleep to feel rested.					
7. I make changes in my eating habits to keep control of my weight					
8. I make changes to my bad habits to maintain my health.					
9. I attend periodic medical check-ups to maintain my health.					
10. Before taking a medicine, I get all the information about the harmful effects on my health.					
11. I try not to self-medicate when I have pain or illness.					
12. I make changes in my habits to maintain my weight.					
13. I maintain personal hygiene practices every day (dental hygiene, hand washing, bathing, cutting nails, etc.).					
14. I try to brush my teeth three times a day.					
15. I try to bathe daily.					
16. I keep my nails short and clean.					
17. I rest to regain my health and energy.					
18. I consume at least three meals a day (breakfast, lunch and dinner).					
19. I eat a balanced diet to maintain my health.					
20. I avoid consuming foods that harm my health (fats, salts, sausages, sweets, soda, etc.).					
21. I usually worry a lot about how I feel.					
22. I usually spend time thinking about my emotions.					
23. I often think about my feelings.					
24. I think my emotions and mood are worth paying attention to.					

Ítems	Never	Almost never	Occasionally	Almost always	Always
25. I try to be in a good mood.					
26. When I am sad, I think of all the pleasures in life.					
27. Although sometimes I feel sad, I usually have an optimistic vision.					
28. I do activities to rest from daily worries (read a book, do sports, go for a run, among others).					
29. I take the time to do things that I like.					
30. I try to maintain a balance between my body, my emotions and my mind.					
31. I participate in activities that help me to be a better person.					
32. I do activities that generate well-being.					
33. I try to get to know myself better every day.					
34. I do things that give me pleasure.					
35. I enjoy maintaining healthy relationships with others.					
36. Every day I try to be at peace with myself.					
37. After work (or study) I try to reward myself with any pleasant activity.					
38. When I perceive that I am stressed, I try to think of other things.					
39. Even if I feel bad, I try to think of pleasant things.					
40. I try to think positive thoughts, even if I feel bad.					
41. I am aware of my feelings in different situations.					
42. I know well how I feel.					
43. To keep my mind relaxed and calm, I do activities that help me feel better.					
44. I experience satisfaction after meditating.					
45. I turn to meditation to find inner peace and strength.					
46. I practice spiritual activities to find harmony with the world.					
47. I feel connected to a being greater than myself (God).					
48. I practice spiritual practices to maintain my health (yoga, tai chi, meditation, praying, biblical coexistence groups, reading spiritual texts, etc).					
49. My relationship with a higher being (God) helps me to love others.					
50. I have learned to forgive other people.					
51. I have learned to forgive myself.					

Ítems	Never	Almost never	Occasionally	Almost always	Always
52. I seek comfort through spiritual means (prayer, meditation, attending religious or spiritual services, or taking spiritual counseling).					