



## VALIDATION OF THE “EIGHT NATURAL REMEDIES QUESTIONNAIRE” – Q8RN – ADULT VERSION

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**Abstract:** The Eight Natural Remedies Questionnaire (Q8RN) comprises eight dimensions: nutrition, exercise, water, sunlight, temperance, pure air, rest, and trust in God. It is used to assess adherence to the healthy habits of the Adventist lifestyle. This article aims to analyze the attributes of validity

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and reliability of the Q8RN, adult version. Descriptive, methodological study, involving 504 participants of Health Fairs in Sao Paulo. Factorial Confirmatory Analysis (FCA) was performed in program R, with WLSMV estimation, polychoric type. There was evidence of validity of the Q8RN instrument, whose goodness of fit adjustments were: CFI = 0.965, Tucker-Lewis Index - TLI = 0.952 and Parsimony adjustment index RMSEA = 0.034. The eight dimensions were maintained, but the questions reduced from 25 to 22. Cronbach's Alpha was 0.72, indicating internal reliability. The questionnaire reached adequate indexes, being considered a valid instrument to measure adherence to the eight natural remedies in adults.

**Keywords:** Validation studies; Lifestyle; Health promotion; Eight natural remedies.

## Introduction

The Eight Natural Remedies (ENR), named since 1863 by Ellen G. White, consist of: Nutrition, Exercise, Water, Sunlight, Temperance, Pure Air, Rest, and Trust in God. Health practices related to ENR have been considered as healthy principles of life that can help to promote health, prevent disease and maintain quality of life (WHITE, 1905).<sup>7</sup>

It is also reiterated that each one of these Natural Remedies has specific beneficial effects to promote and restore health. For a better understanding of its applicability, the concepts adopted in this study for each one of them will be described below.

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 7 Information taken from the text *The Ministry of Healing*, written by Ellen G. White in 1905. Available at: <<https://bit.ly/2RPTLDI>>. Accessed on: Nov. 5<sup>th</sup>, 2018.

## Nutrition

Nutrition involves a natural diet “which is accessible and inexpensive, values the variety, is harmonious in quantity and quality, naturally colored and safely sanitary” (BRAZIL, 2014).<sup>8</sup> The complete and varied diet avoids: diabetes, hypertension, stroke, heart disease and some types of cancer, which, together, are among the main causes of disability and death in Brazil (MALTA *et al.*, 2015).

## Exercise

Exercise is a regular physical activity and is done with the intention of improving or maintaining physical fitness and health (DeCS, 2018).<sup>9</sup> It is any bodily movement that results in energy expenditure, including sports, walking and moderate or intense exercise. From a global perspective, it also includes leisure and the domestic, displacement and occupational activities (POLISSELI, RIBEIRO, 2014).

## Water

Water is a “transparent, odorless and tasteless liquid that is essential for most animals and plants, as well as being an excellent solvent for many substances” (DeCS, 2018).<sup>10</sup> Ingestion of water is associated with general well-being, related to physical and mental health (ESPINOSA-MONTEIRO *et al.*, 2016). Good intestinal function depends on water intake (BRASIL, 2014). The average amount of water consumed daily should be 35-40 ml / kg of body weight (GANDY, 2015; VIVANTI, 2012).

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8 Information taken from the text *Guia alimentar para a população brasileira*, produced by the Department of Basic Attention Secretariat of Health Care, linked to the Ministry of Health, published in 2014. Available at: <<https://bit.ly/1EivId0>>. Accessed on: Sep. 4<sup>th</sup>, 2018.

9 Information taken from the text *Descritores em Ciências da Saúde*, published by the Virtual Health Library (VHL) in 2018. Available at: <<https://bit.ly/2ROUwI3>>. Accessed on: Oct. 1<sup>st</sup>, 2018.

10 Information taken from the text *Descritores em Ciências da Saúde*, published by the Virtual Health Library (VHL) in 2018. Available at: <<https://bit.ly/2ROUwI3>>. Accessed on: Oct. 1<sup>st</sup>, 2018.

Besides the internal use of water, it is important to use it as a therapeutic resource, applied externally. Hydrotherapy, in all forms of indication, is useful for calming nerves and balancing the circulation (WHITE, 2009, p. 267).

### Sunlight

Sunlight has several benefits such as: helps in brain and cognitive biological functions (Bezerra *et al.*, 2016); improves mood and fights depression (THOMAS; AL-ANOUTI, 2017); self-regulation of the body - influences the production of hormones and synthesizes and metabolizes vitamin D (OLIVEIRA *et al.*, 2014; QUADROS, OLIVEIRA, 2016).

### Temperance

Temperance, according to DeCS (2018),<sup>11</sup> means habitual moderation in the indulgence of a natural appetite, especially in relation to alcohol consumption. In the present study temperance was considered as “avoid everything that is harmful, and to use wisely what is wholesome and nourishing” (WHITE, 1877).<sup>12</sup>

### Pure air

Pure air is a mixture of gases present in the earth’s atmosphere, consisting of oxygen, nitrogen, carbon dioxide, and small amounts of other gases. Pure air is considered to be free of contaminants or pollutants that interfere in the human health and well-being or cause harmful effects on the environment (DeCS, 2018).<sup>13</sup>

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 11 Information taken from the text *Descritores em Ciências da Saúde*, published by the Virtual Health Library (VHL) in 2018. Available at: <<https://bit.ly/2ROUwI3>>. Accessed on: Oct. 1<sup>st</sup>, 2018.

12 Information taken from the text *The Primal Cause of Intemperance*, written by Ellen G. White in 1877. Available at: <<https://bit.ly/2Bd4Bay>>. Accessed on: Nov. 5<sup>th</sup>, 2018.

13 Information taken from the text *Descritores em Ciências da Saúde*, published by the Virtual Health Library (VHL) in 2018. Available at: <<https://bit.ly/2ROUwI3>>. Accessed on: Oct. 1<sup>st</sup>, 2018.



## Rest

Rest is a fundamental human need that influences quality of life. Poor quality sleep results in attention maintenance, memory impairment, social difficulties, increased pain, performance in routine tasks and decreased survival (CLARES *et al.*, 2012).

## Trust

Finally, as the last remedy is the Trust in God, which, according to the Virtual Health Library, is “to have hope in a person or thing” (DeCS, 2018).<sup>14</sup> Hope means “belief in a positive outcome” (DeCS, 2018).<sup>15</sup> This belief is connected to a religiosity and / or spirituality whose respective concepts are: set of practices, ways of living and rituals for a set of people in common that leads them to think of a higher being that can be God or another name, according to their culture. Spirituality, on the other hand, involves a personal, intimate search, as well as a devotion and surrender to God (KOENIG; KING; CARSON, 2012).

At the beginning of lifestyle studies and their correlation with health, Belloc and Breslow (1972), in a study entitled “Alameda County Study”, carried out with 6,928 adults, they already worried about the relationship between the state of health and the healthy habits. These authors analyzed the association between common health practices, including hours of sleep, regularity of diet, physical activity, smoking and alcohol consumption.

As a result, they found that the practice of healthy habits produced a cumulative / synergistic effect and were associated with better health, even for the elderly, when compared to the younger ones who failed to carry out the proposed activities. These benefits were identified in different

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14 Information taken from the text *Descritores em Ciências da Saúde*, published by the Virtual Health Library (VHL) in 2018. Available at: <<https://bit.ly/2ROUwI3>>. Accessed on: Oct. 1<sup>st</sup>, 2018.

15 Information taken from the text *Descritores em Ciências da Saúde*, published by the Virtual Health Library (VHL) in 2018. Available at: <<https://bit.ly/2ROUwI3>>. Accessed on: Oct. 1<sup>st</sup>, 2018.

individuals, regardless of age, gender and economic situation (BELLOC, BRESLOW, 1972).

Adventists residing in Loma Linda - California have been studied, being considered a special group of long-lived people seeking to live a healthy lifestyle based on healthy practices related to ENR. The researchers admitted that these habits bring benefits to the cardiovascular system and, consequently, lower mortality risks. They also affirm that religious involvement and activities in the church act as protective factors for mortality, when associated with healthy behavior and social and emotional support (KWOK *et al.*, 2014; MORTON; LEE; MARTIN, 2017).

The National Policy for Health Promotion - PNPS, approved by the Minister of Health of Brazil through Administrative Rule no. 687 on March 30, 2006 (BRASIL, 2006, p. 16),<sup>16</sup> proposes actions that aim at the coverage of “care” related to human needs for integral health. Within this scope, Health Promotion is defined as “a mechanism for strengthening and implementing a transversal, integrated and intersectoral policy [...]” (BRAZIL, 2006, p. 18).<sup>17</sup>

Thus, the Health Promotion seeks, based on the intersectoriality, involving the spheres of the private sector, government and society, to overcome the determinants of the health-disease process, implementing actions that aim to stimulate the systematic practice of physical exercise; the adoption of a healthy diet; measures to combat smoking and alcohol and other actions to promote active aging, which can be implemented in the Health Fairs (MEIRA *et al.*, 2015).

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 16 Information taken from the text *Política Nacional de Promoção da Saúde*, produced by the Ministry of Health through the Secretariats of Health Surveillance and Health Care, and published in 2006 (Series B. Basic Health Texts). Available at: <<https://bit.ly/1b1oBgO>>. Accessed on: Sep. 4<sup>th</sup>, 2018.

17 Information taken from the text *Política Nacional de Promoção da Saúde*, produced by the Ministry of Health through the Secretariats of Health Surveillance and Health Care, and published in 2006 (Series B. Basic Health Texts). Available at: <<https://bit.ly/1b1oBgO>>. Accessed on: Sep. 4<sup>th</sup>, 2018.



In the axis of integral care, the PNPS proposes actions to strengthen the SUS and the expansion of actions for the prevention and Chronical Diseases Control at different levels of care, with a special focus on Primary Health Care (PHC) (MALTA, NETO; SILVA JR., 2011).

Regarding health-related lifestyle assessment, although it is possible to find instruments with reasonable psychometric properties and internal consistency, these instruments do not contemplate the eight components of the Adventist healthy lifestyle proposal (PÔRTO *et al.*, 2015).

Some of them are too extensive to be applied effectively in events that associate research with educational and / or behavioral interventions, as in the case of “Health Fairs”, and it was necessary to construct and validate an instrument that would measure this lifestyle as a whole issue (EXPO HEALTH MANUAL, 2018).<sup>18</sup>

The construct of the “Eight Natural Remedies Questionnaire” (Q8RN) was analyzed by judges in all its extension with eight dimensions and 25 items (ABDALA *et al.*, 2018) and considered validated as to the content, being applied to approximately 500 participants of Health Fairs held in the state of São Paulo.

Continuing the validation process of the instrument, this study aimed to analyze the attributes of validity and reliability of the “Eight Natural Remedies Questionnaire” (Q8RN), in the adult version, to investigate the adoption of the constitutive habits of the Adventist lifestyle.

## Material and Method

This is a descriptive study, methodological type, involving 504 participants from “Health Fairs” offered in public spaces in the State of São

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 18 Information taken from the *Manual da Expo-Saúde*, adapted and published by the Portuguese Union of Seventh-day Adventists in 2014. Available at: <<https://bit.ly/2EoTxve>>. Accessed on: Sep. 4<sup>th</sup>, 2018.

Paulo, Brazil. The model of the fairs is described on the Seventh-day Adventist Church's (SDA), South American Division website (2018)<sup>19</sup> that provides practical guidance on the benefits of each addressed remedy.

The Q8RN was based on White (1905, p. 127)<sup>20</sup> and literally embraces the principles of a healthy life: "Nutrition, Exercise, Pure Water, Sunlight, Temperance, Pure Air, Rest, and Trust in God."

In addition, the components of this instrument were based on some validated lifestyle tools in Brazil and in other countries. They are: FANTASTIC Questionnaire, validated by Rodriguez Añez, Reis, Petroski (2008), Ramírez-Vélez, Agredo (2012) and Silva, Brito and Amado (2014) and applicable to the population from 15 years of age; NAHAS Pentacle Questionnaire, validated by Nahas, Barros, Francalacci (2000); DUKE-DUREL Religious Questionnaire, validated by Taunay *et al.* (2012) and Lucchetti *et al.* (2012).

The data were collected in "Health Fairs" held in various places in São Paulo: schools, parks, blocks, streets, etc. Participants signed the Consent Form and responded to the questionnaire on a Tablet configured as an Applicative developed on the Android system.

Factorial Confirmatory Analysis (FCA) was performed in the R program, by a WLMSV (Weighted Least Squares Mean and Variance-adjusted) polychoric type, in which the categories of responses of the questionnaire evaluated were, for the most part, Likert (TELLO *et al.*, 2010). For the results, Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) values greater than 0.92 and Root Mean Mean Square of Approximation (RMSEA) less than 0.07 were considered acceptable (HAIR *et al.*, 2009).

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 19 Information obtained through the Seventh-day Adventist Church's Department of Health website. Available at: <<https://bit.ly/2PwE5hR>>. Accessed on: Aug. 27<sup>th</sup>, 2018.

20 Information taken from The Ministry of Healing, written and published by Ellen G. White in 1905. Available in Available at: <<https://bit.ly/2RPtLDl>>. Accessed on: Nov. 5<sup>th</sup>, 2018.





The IFC means the comparative or incremental adjustment index. It measures a relative improvement in the adjustment of the researcher's model in relation to the standard model. The closer to one, the better. TLI indicates non-standard Tucker-Lewis index. There are aspects that compensate for the effects of the model's complexity. The value may fall outside the range of zero to one, but values close to one indicate a good fit. The RMSEA, also called the parsimonious adjustment index, estimates how well the parameters of the model reproduce the population covariance, being better equal to zero. Values close to 0.06 or smaller indicate reasonable adjustments to the model. The Standardized Root Mean Square Residual (SRMR) is based on the discrepancy between the correlations in the sample matrix and the correlations predicted by the model, that is, it is based on the differences between the predicted and observed covariance. The closer to zero the better (LEÓN, 2011; HAIR *et al.*, 2009).

The Cronbach's alpha test was also evaluated as a measure of the internal consistency of the construct that varies from 0 to 1, with values from 0.60 to 0.70 considered as the lower limit of acceptability (HAIR *et al.*, 2009).

This study was approved by the Research Ethics Committee of the proposing institution, number 1,404,196, on 02/02/2016. Participants signed the Free and Informed Consent Term (TCLE) pursuant to resolution 466/12 of the National Health Council.

## Results

Among the 504 participants, the mean age was 44.0 (SD = 16.6), 63.3% (n = 319) female, 72.8% (n = 367), skin color self-referred white. The majority (47.9%, n = 232) had completed high school and incomplete upper level (Table 1).

**Table 1:** Sociodemographic data of participants in the Health Fairs in São Paulo, Brazil, 2018.

Variables		Absolute Frequency (n)	Relative frequency (%)
Gender (n= 504)	Female	319	63.3
	Male	178	35.3
	Did not respond	7	1.4
Skin color (n= 504)	White	367	72.8
	Brown	99	19.6
	Black	22	4.4
	Yellow	1	0.2
	Indian	6	1.2
	Did not respond	9	1.8
schooling (n= 504)	Illiterate or incomplete fundamental	70	14.5
	Complete fundamental or incomplete high school	64	13.2
	Complete high school or incomplete graduated	232	47.9
	Graduated	109	22.5
	Post graduated	9	1.9

**Source:** Primary study, self elaboration.

Concerning religion, 43.9% (n = 209) of respondents were Adventists, 31.3% (n = 149) Catholics, 14.3% (n = 68) of other evangelical religions, 3.6 (n = 17) spiritists, 3.6% (n = 17) do not profess any religion and 3,4% (n = 16) are of other denominations.

When applying the FCA, three questions were taken from the Dimensions: 1 - Nutrition: How many meals do you make per day? (breakfast, lunch, dinner, snack, etc); 5 - Temperance: Do you consider yourself balanced about time spent studying, working, internet, television, meals, friendships,

sexuality, etc.? 7 - Rest: Do you separate one day a week to rest from routine work, home or study?

According to the FCA, according to R Software, there was evidence of validity of the Q8RN instrument as the factorial load presented goodness of fit adjustment data: Comparative Fit Index (CFI) = 0.972, Tucker-Lewis Index (TLI) = 0.964, parsimonious - RMSEA = 0.044 and WRMR = 1.024, confirming the evidence of validity. The multivariate analysis allowed to maintain the eight dimensions, but indicated reducing from 25 to 22 questions of the original instrument, thus becoming a Q8RN with 22 items.

For the calculation of the classification of the lifestyle, it was followed the logic of proportion of the scores adopted by the FANTASTICO Questionnaire of Rodriguez-Añez *et al.* (2008).

Cronbach's Alpha was 0.72, indicating internal reliability of the instrument. The correlation matrix between the items showed that some loads factors are weak but with good adjustments in the model (Tables 2 and 3).

**Table 2:** Correlation Matrix between Q8RN itens, adult version. 1<sup>st</sup> part, São Paulo, Brazil, 2018.

	nutri1	nutri3	nutri4	exerc5	exerc6	exerc7	agua8	agua9	sol10	sol11	temp13
nutri1	1.000										
nutri3	0.277	1.000									
nutri4	0.199	0.226	1.000								
exerc5	0.116	0.132	0.095	1.000							
exerc6	0.140	0.159	0.114	0.746	1.000						
exerc7	0.140	0.159	0.114	0.746	0.900	1.000					
agua8	0.164	0.186	0.134	0.198	0.239	0.238	1.000				
agua9	0.115	0.131	0.094	0.139	0.168	0.167	0.178	1.000			
sol10	0.096	0.109	0.078	0.160	0.193	0.192	0.177	0.124	1.000		
sol11	0.113	0.129	0.092	0.188	0.227	0.227	0.208	0.146	0.242	1.000	
temp13	0.240	0.273	0.196	-0.001	-0.002	-0.002	0.123	0.086	0.062	0.073	1.000
temp14	0.133	0.150	0.108	-0.001	-0.001	-0.001	0.068	0.047	0.034	0.040	0.269

temp15	0.144	0.163	0.117	-0.001	-0.001	-0.001	0.073	0.051	0.037	0.044	0.292
temp16	0.278	0.316	0.226	-0.002	-0.002	-0.002	0.142	0.100	0.072	0.085	0.564
ar17	0.131	0.148	0.106	0.108	0.130	0.130	0.161	0.113	0.138	0.163	0.065
ar18	0.165	0.187	0.134	0.136	0.164	0.164	0.203	0.143	0.175	0.206	0.083
desc19	0.113	0.128	0.092	0.097	0.117	0.116	0.049	0.034	0.088	0.104	0.112
desc20	0.126	0.143	0.102	0.108	0.130	0.130	0.054	0.038	0.099	0.116	0.125
conf22	0.120	0.136	0.097	-0.001	-0.001	-0.001	0.077	0.054	0.056	0.066	0.287
conf23	0.179	0.203	0.146	-0.001	-0.002	-0.002	0.114	0.080	0.084	0.099	0.428
conf24	0.202	0.229	0.165	-0.001	-0.002	-0.002	0.129	0.091	0.095	0.112	0.484
conf25	0.204	0.231	0.166	-0.001	-0.002	-0.002	0.130	0.092	0.096	0.113	0.489

**Legend:** nutri = nutrition; exerc = exercise; agua = water; sol = sun light; temp = temperance; ar = air; desc = rest; conf= confidence/trust.

**Source:** Primary study, self elaboration.

**Table 3:** Correlation Matrix between Q8RN itens, adult version. 2<sup>nd</sup> part, São Paulo, Brazil, 2018.

	temp14	temp15	temp16	ar17	ar18	desc19	desc20	conf22	conf23	conf24	conf25
temp14	1.000										
temp15	0.161	1.000									
temp16	0.311	0.338	1.000								
ar17	0.036	0.039	0.076	1.000							
ar18	0.045	0.049	0.096	0.212	1.000						
desc19	0.062	0.067	0.129	0.134	0.170	1.000					
desc20	0.069	0.075	0.144	0.150	0.189	0.561	1.000				
conf22	0.158	0.172	0.332	0.054	0.068	0.064	0.071	1.000			
conf23	0.236	0.256	0.496	0.080	0.101	0.095	0.106	0.770	1.000		
conf24	0.267	0.290	0.561	0.091	0.115	0.107	0.120	0.332	0.496	1.00	
conf25	0.269	0.292	0.566	0.092	0.116	0.108	0.121	0.335	0.500	0.565	1.00

**Legend:** temp = temperance; ar = air; desc = rest; conf = confidence/trust.

**Source:** Primary study, self elaboration.

The standardized table of Q8RN items showed that most items (90.9%) had loads above 0.40 and all had statistical significance ( $p < 0.05$ ). In

addition, there was a covariance between two variables of the “trust” dimension, where confidence in God or in a higher being positively influences people’s way of living and vice versa ( $p < 0.05$ ) (Table 4).

**Table 4:** Standardized estimation with  $p$  value of each item and their respective domains of the Q8RN (adult). São Paulo, 2018.

Factors	Estimator WLSMV – Confirmatory Factor Analysis (n=491/504)		
	Estimation	Standardized Estimation	p-value
<b>Domain 1. Nutrition</b>			
- How often do you include in the main meals of the day: beans, whole grains, nuts, fruits, vegetables? (1)	1.000	0.495	0.000
- How do you qualify the type of food you eat the most? * Choose the most appropriate option for you. (3)	1.134	0.561	0.000
- How many of the following items do you consume one or more times a week? (snacks, crackers, fried foods, soft drinks and sweets in general) (4)	0.814	0.403	0.000
<b>Domain 2. Exercise</b>			
- Do you practice leisure activities such as walking, cycling, playing ball, extreme sports or other hobbies and enjoyable activities? (5)	1.000	0.786	0.000
- How many times a week do you do intense exercise (which makes you sweat and increase your heart rate, such as long walking, running, cycling, etc.)? (6)	1.207	0.949	0.000
- How many minutes do you spend “on average” when you exercise intensely until you sweat? (7)	1.206	0.948	0.000



<b>Domain 3. Water</b>			
- How many cups (250 ml) of water do you drink daily? (8)	1.000	0.504	0.000
- Do you use water as a remedy for home treatments when needed? (For example, hot and cold packs, ice application, inhalation, foot scrub and baths in general). (9)	0.702	0.354	0.000
<b>Domain 4. Sun light</b>			
- How often do you expose yourself to the sun for at least 15 to 20 minutes a day? (10)	1.000	0.453	0.000
- In your house, are the windows and shutters open daily for sunlight and natural light? (11)	1.178	0.534	0.000
<b>Domain 5. Temperance</b>			
- Do you drink alcohol (beer, wine, liquor, brandy, sugarcane liquor, or any other)? (13)	1.000	0.698	0.000
- Do you smoke cigarettes, pipes, or do you use any tobacco smoke? (14)	0.551	0.385	0.000
- Have you used any drugs, such as marijuana, crack, cocaine, etc. in the last three months? (15)	0.599	0.418	0.019
- Do you drink drinks that contain caffeine? (coffee, black tea, green tea, mate tea, white tea or soft drinks) (16)	1.158	0.808	0.000
<b>Domain 6. Air</b>			
- Considering the places where you spend most of the time, how do you rate the quality of the air you breathe? (17)	1.000	0.410	0.000
- Do you take deep breaths outdoors or when you need to control tension and anxiety? (18)	1.261	0.518	0.000

<b>Domain 7. Rest</b>			
- Do you sleep 7 to 8 hours a night and wake up rested and in good spirits most of the time? (19)	1.000	0.709	0.000
- Do you usually sleep early? (around 10 pm or before that time). (20)	1.117	0.792	0.000
<b>Domain 8. Trust</b>			
- Do you trust in God? (in a Higher Self or something sacred) (22)	1.000	0.443	0.000
- Does your trust in God (Higher Self or something sacred) positively influence your way of life? (23)	1.494	0.662	0.000
- How often do you attend religious or spiritual meetings? (24)	1.688	0.749	0.000
- Do you practice religious or spiritual activities in your private life? (meditate, pray, read the Bible or religious books, do charity, etc.). (25)	1.704	0.755	0.000
<b>Covariance</b>			
(22= Do you trust in God? In a Higher Self or something sacred?)~~(23= Does your trust in God, Higher Self or something sacred, positively influence your way of life?)	0.477	0.710	0.000

**Source:** Primary study, self elaboration.

## Discussion

Lifestyle has been a factor of great repercussion when it is associated with the prevalence of chronic diseases. Studying about its influence in promoting health linked to the practice of “Eight Natural Remedies” is of paramount importance. In order to improve the evaluation of adherence to these healthy principles of life, we opted to evaluate the validity evidence of a new instrument, whose validation of the construct has already been finalized and presented in the study by Abdala *et al.* (2018).

As it is a multidimensional, objective and pre-established dimensions' instrument based on the Adventist health philosophy (KWOK *et al.*, 2014; Morton; Lee, Martine, 2017), a polychoric estimation analysis was used. This allows to correlate / covariate categorical items, which is possible to treat categorical variables as continuous variables (HOLGA *et al.*, 2010).

When comparing the goodness adjustments of the present study with those applied in similar instrument validations on lifestyle, it was observed that similar values were found in a validation of an instrument called Health Promoting Lifestyle Profile-II (HPLP-II) in which the authors analyzed nutrition, good health habits and physical activity of 788 university students. The results of the goodness adjustments reached were: CFI 0.92, TLI = 0.90, RMSEA <0.045 and SRMR ≤ 0.055 (p <0.001). The internal consistency of this instrument was 0.70 (LIM *et al.*, 2016).

The FANTASTICO questionnaire, as well as the Q8RN, also obtained a Cronbach's Alpha in previous studies ranging from 0.69 to 0.80 when validated in the population of adults older than 18 years (RODRIGUEZ-AÑEZ; REIS; PETROSKI, 2008; RAMÍREZ- VÉLEZ; AGREDO, 2012; SILVA *et al.*, 2014; VILAR LÓPEZ *et al.*, 2016).

The limitation of this study is that we did not find similar publications to compare the results found in the validation process of Q8RN, considering all the dimensions, estipulating them as gold standard.

## Conclusion

The adult lifestyle, based on the Adventist health philosophy, could be assessed through the Q8RN which, after review process maintained the original eight dimensions and was reduced to 22 questions.

The measures of validity and reliability reached adequate indexes, being considered an instrument that presents evidences of validity and reliability, corresponding to the proposal of a healthy lifestyle, based and guided by



the Department of health of the Seventh Day Adventist to promote a comprehensive health.

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**EIGHT NATURAL REMEDIES QUESTIONNAIRE**

Lifestyle Assessment for Adults and Adolescents Ages 12 Years and Older

Guidelines: Mark an X that most closely matches your practice in the last three months

Do- mains	Items	Questions	Answers (0-4)				
1. Nutri- tion	1	How often do you include in the main meals of the day: beans, whole grains, nuts, fruits, vegetables?	Almost never	Rarely	Some times	Many times	Always
	2	How do you qualify the type of food you eat the most? * Choose the most appropriate option for you.	<b>Non vegetarian:</b> Eat meat of various types more than once a week	<b>Semi vegetarian:</b> Eat meat of various types maximum 1 time per week	<b>Pesco vegetarian:</b> Eat meat, chicken and other poultry less than once a month, and eats fish more than 1 time per month	<b>Ovolacto vegetarian:</b> Eat dairy and eggs more than once a month and fish and meat less than once a month	<b>Strict vegetarian:</b> Consume milk, cheese, eggs, fish or meat maximum 1 time per month or less
	3	How many of the following items do you consume one or more times a week? (snacks, crackers, fried foods, soft drinks and sweets in general)	Four to five items	Three items	Two items	One item	None

2. Exercise	4	Do you practice leisure activities such as walking, cycling, playing ball, extreme sports or other hobbies and enjoyable activities?	Never	Almost never	Some times	Many times	Always
	5	How many times a week do you do intense exercise (which makes you sweat and increase your heart rate, such as long walking, running, cycling, etc.)?	Never	Less than 1 per week	1 to 2 times per week	3 to 4 times per week	5 or more times per week
	6	How many minutes do you spend "on average" when you exercise intensely until you sweat?	None, I don't do it	5 to 10 minutes	11 to 20 minutes	21 to 30 minutes	31 to 60 minutes
3. Water	7	How many cups (250 ml) of water do you drink daily?	None	1 to 3 cups	4 to 6 cups	7 cups	8 or more
	8	Do you use water as a remedy for home treatments when needed? (For example, hot and cold packs, ice application, inhalation, foot scrub and baths in general).	Never	Almost never	Some times	Many times	Always
4. Sun light	9	How often do you expose yourself to the sun for at least 15 to 20 minutes a day?	Never	Almost never	Some times	Many times	Always
	10	In your house, are the windows and shutters open daily for sunlight and natural light?	Never	Almost never	Some times	Many times	Always

5. Temperance	11	Do you drink alcohol (beer, wine, liquor, brandy, sugarcane liquor, or any other)?	Yes	----- -----			No
	12	Do you smoke cigarettes, pipes, or do you use any tobacco smoke?	Yes	----- -----			No
	13	Have you used any drugs, such as marijuana, crack, cocaine, etc. in the last three months?	Yes	----- -----			No
	14	Do you drink drinks that contain caffeine? (coffee, black tea, green tea, mate tea, white tea or soft drinks)	Yes	----- -----			No
6. Air	15	Considering the places where you spend most of the time, how do you rate the quality of the air you breathe?	Too bad	Bad	Regular	Good quality	Very good quality
	16	Do you take deep breaths outdoors or when you need to control tension and anxiety?	Never	Rarely	Algumas vezes	Many times	Always
7. Rest	17	Do you sleep 7 to 8 hours a night and wake up rested and in good spirits most of the time?	Never	Almost never	Some times	Many times	Always
	18	Do you usually sleep early? (around 10 pm or before that time).	Never	Almost never	Some times	Many times	Always



8. Trust	19	Do you trust in God? (in a Higher Self or something sacred)	Never	Almost never	Some times	Many times	Always
	20	Does your trust in God (Higher Self or something sacred) positively influence your way of life?	Never	Almost never	Some times	Many times	Always
	21	How often do you attend religious or spiritual meetings?	Rarely or never	Sometimes per year	Two or three times per month	Once a week	More than once a week
	22	Do you practice religious or spiritual activities in your private life? (meditate, pray, read the Bible or religious books, do charity, etc.).	Rarely or never	Few times per month	Two or three times per week	Once a day	More than once a day

### How to calculate the total Q8RN score:

The total Q8RN score is the sum of the points assigned to each item, that is, each question scores from zero (0) to four (4), totaling a maximum of 88 points if all 22 questions are answered.

To classify Lifestyle based on the “Eight Natural Remedies”, the following parameters must be considered:

**0 - 25 – insufficient** ( )

**26 - 44 – regular** ( )

**45 - 58 – good** ( )

**59 - 73 – very good** ( )

**74 – 88 - excellent** ( )



## Subscale scores

The questionnaire consists of a total 22 items / questions and eight domains. The score for each domain will be calculated based on the number of items. The Likert scale (zero to four points in ascending order) is to be used to calculate the score of each item, except: item 11 to 14 of domain domain 5 (Temperance) that are dichotomous (0 or 4 points). The cutoff point will be the average / median, based on the number of questions per domain, and the parameter will be between the minimum and maximum values. Example: In the Nutrition domain there are three questions / items with a rank of 0-12, being 6 the average / median (cutoff point).