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Successful Aging Scale: Validity and Reliability Study

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ABSTRACT

The purpose of this research is to develop a successful aging scale specific to Turkey. This research was carried out on two different study groups for exploratory and confirmatory factor analysis studies. The study group formed for exploratory factor analysis consists of 521, and the group for confirmatory factor analysis consists of 243 elderly individuals. By the analyzes carried out, the KMO value of the Successful Aging Scale was found to be .97; validity and reliability analyzes were continued. It was observed that the 19-item SAS with item loads varying between .74 and .84 explained 61.42% of the total variance. After the exploratory factor analysis studies of the SAS, the confirmatory factor analysis studies were started and after the two modifications, the model fit indices were found at an acceptable level ($\chi^2 / df = 2.24$, RMSEA = .069, CFI = .922, TLI = .911, SRMR = .067). In order to determine the criterion-based validity of the SAS, Successful Aging Scale and the Aging In-Situ Scale were used. As a result of the analysis, it was seen that the SAS showed a moderate meaningful relationship with both scales. The Cronbach alpha internal consistency coefficient of the total score of the SAS was calculated as .96 in the first study group and .90 in the second study group.

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Keywords:

Successful aging, scale, elder.

1. Introduction

As people age, they lose some of their abilities and continue to develop others. Successful aging refers to the process of establishing the balance between these lost and developed skills, using the potential to the fullest, and dealing with limitations as much as possible (Hewstone et al., 2005). Successful aging is defined as the individual's acceptance of old age as a natural process like other developmental periods, being able to use his physical functions appropriately, continuing his active participation in social life and adapting to changes.

When the history of the concept of successful aging is examined, it is seen that the first discourses on this subject were put forward by R. J. Havighurst. According to Havighurst, who suggests that each individual is active in life and will be happy if they replace the changing roles with Activity Theory, the main purpose of gerontology is summarized as supporting individuals to pass the advanced adulthood period easily (Özmete, 2012; Yapıcıoğlu, 2009). However, it is seen that Rowe and Kahn (1987) started to widespread after the 1980s, which personally refers to the concept of successful aging and has been carried out on this subject.

The successful aging model, which was put forward by Rowe and Kahn about almost 30 years ago, is the basis for many studies today. After the publication of the article titled "Human aging: usual and successful" written by Rowe and Kahn in 1987, the literature expanded with concepts such as "active aging", "positive aging", "healthy aging" and "ideal aging". This article is not just cited from the geriatric, gerontology, or

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aging literature, but also from nursing, dental science, psychology, sociology, political sciences and all medical, social, cultural and political fields related to aging (Bülow & Söderqvist, 2014). According to Rowe and Kahn (1997), successful aging consisting of three basic hierarchical building blocks (low probability of disability due to disease high cognitive and physical functioning capacity and active lifestyle) is defined as “the individual's physical, mental and social harmony”.

In the general review of the definition of successful aging by Bowling and Dieppe (2005), the basic theoretical components of successful aging are listed as follows:

- Life expectancy at birth,
- Life satisfaction and well-being,
- Mental and psychological health and cognitive functions,
- Personal development, learning new things
- Physical health and functions, independent living
- Psychological characteristics and resources such as perceived autonomy, control, independence, adaptation, coping, self-esteem, positive perspective, goals, self-perception
- Social participation, leisure activities
- Social connections, support, participation, activity

In addition to these basic theoretical components, sub-definitions such as achievements, enjoyment of nutrition, economic security, neighborhood, physical appearance, productivity and contribution to life, sense of humor, sense of purpose and spirituality are also added to the concept.

Depp and Jeste (2006) examined 28 studies on predictors of successful aging. It was seen that physical activity was considered as a predictor in 26 of these studies. Cognitive functions in 15 of the studies, life satisfaction and well-being in 9, social participation and productivity in 8, not suffering from any disease in 6, long life in 4, self-evaluation of health in 3, personality traits, 2 of them environment and income, 2 of them evaluating their own successful aging status were considered as predictors of successful aging. Turkey's first Successful Aging Scale, originally developed by Reker (2009), was adapted into Turkish by Hazer and Özsungur (2017). Considering the theoretical background of the scale, Rowe and Kahn (1997) stated that preventing illness and weakness, having high cognitive and physical function, commitment to life; Baltes and Baltes' (1990) selection, optimism, positive side; Schulz and Heckhausen's (1996) primary and secondary control; It is seen that Ryff (1989) is based on the concepts of psychological well-being.

Despite successful aging work covers a wide place in world literature (Eustice-Corwin et al., 2020; Lee et al., 2017; Tarmazdi et al., 2020), it appears to be a limited number of studies in Turkey Although it is seen that there are some studies on successful aging (Aydın, 2006; Aydın & Aydın- Considered, 2014, Çifçil, 2012; Görgün-Baran, 2008), it is observed that the existence of specific vehicle Turkey a successful aging. Although the validity and reliability studies of the scale, which was adapted into Turkish by Hazer and Özsungur (2017) are suitable, it is found important that the scale to be developed on a concept sensitive to the culture. In a study conducted on the successful aging perceptions of 418 people in Antalya in 2018 (Yazıcı, 2018), it is seen that the researchers applied a 37-item questionnaire. Considering that the first adaptation of the Successful Aging Scale was published in 2017 in Turkey, it is thought that the data collection stages of this study may have been done at similar times. Because there is no Successful Aging Scale at that time, the researchers may prefer to collect data with the questionnaire, which is a less reliable method .When the literature is examined, it is noteworthy that there is a limited number of studies on successful aging, and the existing ones are mostly review articles (Özdemirkan et al., 2020; Sinan & Bilgili, 2019). Within the framework of all this information, it is believed that the Successful Aging Scale, which will be developed specifically for the Turkish population, will increase, and strengthen original studies. For this purpose, Successful Aging Scale specific to older people in Turkey is aimed at developing in this research.

2. Material and Methods

2.1. Research Model

Culture-specific Successful Aging Scale was developed in the study. After the field scanning of the scale development study, the format of the scale was determined and the item pool was created accordingly (De

Vellis, 2003). It is a 5-point Likert-type scale, which consists of 19 items. Information on validity and reliability analysis of SAS is presented below.

2.2. Item Writing for SAS and Creating an Item Pool

Before creating an item pool for SAS, a detailed literature research was conducted on the concepts of successful aging, active aging, and healthy aging. Following the review of the literature, 198 items were prepared by considering all variables related to the concept of successful aging. These items were reduced to 133 items by being submitted to the opinions of 3 experts. The 133-item form was submitted to the opinions of 11 different experts, the feedback given to the items was evaluated with the Lawsche technique, and 29 items were removed from the item pool measurement tool, and the 84-item implementation form was finalized. Repeating the items is structured in a 5-point rating type considering the structure of the scale.

2.3. Universe and Sample

During the exploratory factor analysis phase of the research, data from 600 individuals were collected, and after the data extraction process, the analyzes were made over 521 data. The sample size was created according to the sample calculation table given by The Research Advisors (2006) for a population of more than 2,500,000 individuals (Turkey Statistical Institute, 2020) with 5% margin of error. Within the scope of the research, data were collected from the provinces of Istanbul, Antalya, Aydın cities where data can be easily collected. The demographic information of the individuals participating in the study which is conducted for EFA is given below:

Table 1. Frequency and Percentage Values of Demographic Information of the Exploratory Factor Analysis Group

Variable	f	%	Variable	f	%
Gender			Number of children		
Female	356	68.3	No children	30	5.8
Male	165	31.7	one	87	16.7
Age			2	232	44.5
60-64	158	30.3	3 +	97	18.6
65-69	176	33.8	Unknown	75	14.4
70-74	105	20.2	Education level		
75 +	54	10.4	Literate and under	32	6.1
Unknown	28	5.4	Primary school	91	17.5
City			Middle School	30	5.8
İstanbul	56	10.7	High school	155	29.8
Antalya	360	69.1	Undergraduate and above	188	36.1
Aydın	105	20.2	Unknown	25	4.8
Living place			Marital status		
In his own home / with his wife	243	46.6	The married	262	50.3
In your own home / alone	176	33.8	Single	35	6.7
With children	77	14.8	Divorced / lost spouse	197	37.8
Unknown	25	4.8	Unknown	27	5.2
Total	521	100	Total	521	100

In Table 1, the frequency and percentage values according to the demographic information of the elderly individuals participating in the study are indicated. 356 of the elderly individuals (68.3%) are female and 165 (32.7%) are male. 158 of the individuals (30.3%) were between 60 and 64 years old, 176 (33.8%) were between 65 and 69 years old, 105 (20.2%) were between 70 and 74 years old, and 54 (10.4%) were 75 years old and is above. 28 (5.4%) individuals in the group did not state their age. When the city where elderly people live was examined, it was seen that 56 (10.7%) lived in Istanbul, 360 (69.1%) were living in Antalya, and 105 (20.2%) were living in Aydın. When the places and people where the individuals live were examined, it was found that 243 (46.6%) of the elderly who participated in the study were living with their spouses in their own homes, 176 (33.8%) were living alone in their own houses and 77 (14.8%) were living with their children. 25 of the elderly individuals (4.8%) did not give information about the place they lived. It was concluded that 30 (5.8%) of the individuals in the study group did not have children. It was seen that 87 of the elderly (16.7%) had 1 child, 232 (44.5%) had 2, 97 (18.6%) had 3 or more children. It was observed that 75

elderly individuals (14.4%) did not answer this question. It is thought that much of these unresponsive elderly people are individuals who do not have children. According to the level of education, 32 (6.1%) of the individuals were literate or not, 91 (17.5%) were primary school graduates, 30 (5.8%) were secondary school graduates, 155 (29.8%) were high school graduates. It was noted that 188 (36.1%) had a bachelor's degree and above. It was observed that 25 (4.8%) of the participants left this question blank. When the marital status of the individuals participating in the study was examined, it was observed that 262 (50.3%) were married, 35 (6.7%) were single, and 197 (37.8%) were divorced or lost their spouses. The percentage of 27 people who did not answer this question is 5.2.

During the confirmatory factor analysis phase, data were collected for the second time and 243 elderly individuals were reached. Demographic information about the second stage of scale development is presented below:

Table 2. Frequency and Percentage Values of Demographic Information of the Confirmatory Factor Analysis Group

Variable	f	%	Variable	f	%
Gender			Number of children		
Female	171	70.4	No children	22	9.1
Male	61	27.6	one	47	19.3
Unknown	2	.8	2	98	40.3
Age			3	25	14.8
60-64	127	52.3	4 +	32	13.2
65-69	45	18.5	Unknown	8	3.3
70-74	26	10.7	Education level		
75 +	11	4.5	Literate and under	19	7.9
Unknown	34	14	Primary school	39	16.0
City			Middle School	15	6.2
İstanbul	201	82.7	High school	60	24.7
The others	39	16.1	Undergraduate and above	107	44.0
Unknown	3	1.2	Unknown	3	1.2
Living place			Marital status		
In his own home / with his wife	141	58.0	The married	156	64.2
In your own home / alone	43	17.7	Single	16	6.6
With children	37	22.7	Divorced / lost spouse	67	27.6
Unknown	4	1.6	Unknown	4	1.6
Total	243	100	Total	243	100

In Table 2, the frequency and percentage values according to the demographic information of the elderly individuals participating in the study are indicated. 171 of the elderly individuals (70.4%) are female and 61 (27.6%) are male. 2 (.8%) individuals in the group did not state their gender. 127 of the individuals (52.3 %) were between 60 and 64 years old, 45 (18.5%) were between 65 and 69 years old, 26 (10.7%) were between 70 and 74 years old, and 11 (4.5%) were 75 years old and is above. 34 (14%) individuals in the group did not state their age. When the city where elderly people live was examined, it was seen that 201 (82.7%) lived in Istanbul, 39 (16.1%) were living in other cities such as Bursa, Aydın, Ankara. 3 (1.2%) individuals in the group did not state their city where they live. When the places and people where the individuals live were examined, it was found that 141 (58%) of the elderly who participated in the study were living with their spouses in their own homes, 43 (17.7%) were living alone in their own houses and 37 (22.7%) were living with their children. 4 of the elderly individuals (1.6%) did not give information about the place they lived. It was concluded that 22 (9.1%) of the individuals in the study group did not have children. It was seen that 47 of the elderly (19.3%) had 1 child, 98 (40.3%) had 2, 25 (14.8%) had 3, 32 (13.2%) 4 or more children. It was observed that 8 elderly individuals (3.3%) did not answer this question. According to the level of education, 19 (7.9%) of the individuals were literate or not, 39 (16.0%) were primary school graduates, 15 (6.2%) were middle school graduates, 60 (24.7%) were high school graduates. It was noted that 107 (44%) had a bachelor's degree and above. It was observed that 3 (1.2%) of the participants left this question blank. When the marital status of the individuals participating in the study was examined, it was observed that 156 (64.2%) were

married, 16 (6.6%) were single, and 67 (27.6%) were divorced or lost their spouses. The percentage of 4 people who did not answer this question is 1.6.

2.4. Data Collection Tools for the Criterion Validity of SAS

Successful Aging Scale: The original of Successful Aging Scale, which was adapted into Turkish by Hazer and Özsungur (2017), was developed by Reker (2009). The SAS-Successful Aging Scale, which consists of two sub-dimensions as 10 items and coping with problems with a healthy lifestyle, was prepared in 7-point likert type. The combined reliability coefficients of the Healthy Lifestyle and Dealing with Problems factors were measured as .833 and .928, respectively. The factors were found to have a high level of reliability. Generally, the Cronbach alpha internal consistency coefficient of the scale. It was reported as 85.

Aging in Place Scale: Developed by Kalınkara and Kapıkıran (2017) and aiming to reveal the satisfaction levels of the elderly with the environment they live in, the LES consists of 15 items and three sub-dimensions. As a result of the validity and reliability analyzes performed with the data collected from 189 elderly individuals, the variance of the items in the whole scale reached a total of 62.50% explanatory, with 23.66% for the first factor, 20.65% for the second factor and 18.19% for the third factor. The factor loads of the items of the three-factor structure are above .50. Then, confirmatory factor analysis was conducted with the LISREL package program to determine whether the scale was a suitable structure. $\chi^2 = (87, N = 189) 138.37$, $\chi^2 / df = 1.59$ with $RMSEA = .056$, $SRMR = .052$, $CFI = .98$, $NNFI = .98$, and $GFI = .91$ $CI = .038-.073$ and It has reached good levels of compliance. The Cronbach's alpha coefficient calculated for the reliability of the 15-item scale was .85 for factor one, .84 for factor two, .85 for factor three, and .90 for the whole scale.

2.5. Data Collection for Validity and Reliability Analysis of SAS

In the process of developing SAS, data were collected in two stages. Validity and reliability analyzes were conducted with two different research groups. Some of the data was collected via the internet using Google form, and the rest was collected manually. The link created to collect data via the Internet was shared only with the people involved in the data collection process. Data collection from illiterate elderly people was carried out by the researchers by reading them personally and receiving their answers.

2.6. Data Analysis and Interpretation

In the development validity and reliability studies of the Successful Aging Scale, exploratory and confirmatory factor analysis and criterion validity were used for construct validity, and the Cronbach alpha coefficient was used for reliability. SPSS 21 package program was used for data analysis in the research. The KMO value of the Successful Aging Scale was found to be .97 and validity analyzes were continued.

3. Findings

Before starting the analysis, the appropriateness of the number of EFA data to the factor analysis was tested with the Kaiser-Meyer-Olkin (KMO) sampling adequacy criterion. KMO is an analysis that compares the observed correlation coefficient size with the partial correlation coefficient size. For the data set to be suitable for factor analysis, the KMO ratio should be above .5 (Leech, Barret, & Morgan, 2005; Şencan, 2005). The KMO coefficient because of the analysis was found to be .97 (Table 3).

Table 3. KMO and Bartlett's Values

<i>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</i>		.971
	Approx. chi-square	12408,877
Bartlett's Test of Sphericity	df	561
	p	,000

The ratio of 521 data to the number of items (84) in the item pool is 6.20. For EFA, the value per item is recommended to be greater than 5 (Büyüköztürk, 2011). It seems that this recommendation is also met. In addition, Bartlett's test of sphericity was performed for 521 data and the result was $p < .001$. With this result, it is understood that the data comes from multivariate normal distribution, it is different from the unit matrix in the correlation or covariance matrix, and a factor can be extracted from the correlation matrix (Çokluk et al., 2016; Şencan, 2005). As a result of all analyzes, it was seen that the data set was suitable for EFA. In the exploratory factor analysis, principal component analysis as a factoring technique and

confirmatory factor analysis was performed to test the accuracy of the structure. The ratio of 243 data obtained for CFA to the number of items (19) in the scale is 12.79. This rate is sufficient according to the suggestion of Büyüköztürk (2011). The KMO coefficient was found to be .97, and Bartlett's test of sphericity was found to be $p < .001$. Within these results, it was thought that the data set was ready for analysis.

3.1. Findings Regarding Validity Analysis Results of SAS

3.1.1. Construct validity: The construct validity and factor load values of the items were determined because of the exploratory factor analysis. The factor load values of the SAS are presented in Table 4.

Table 4. Factor Load Values of the SAS

Item no	Factor load
Item 1	.747
Item 2	.819
Item 3	.786
Item 4	.755
Item 5	.839
Item 6	.790
Item 7	.738
Item 8	.775
Item 9	.748
Item 10	.785
Item 11	.746
Item 12	.803
Item 13	.829
Item 14	.771
Item 15	.763
Item 16	.838
Item 17	.786
Item 18	.760
Item 19	.799

In Table 4, it is seen that SAS has factor loads varying between .738 and .839 and consists of one dimension. According to Çakır (2014), factor load values are expected to be .40 or higher. However, in practice, it is acceptable to reduce this limit value to .30 for a small number of items. According to the factor load values, it is seen that the scale consists of a single dimension and 19 items. Below are the total variance amounts of the SAS explained. It is seen that Successful Aging Scale explains 61.42% of the total variance. Considering these data, it was decided to keep 19 of the 84 items in the scale.

CFA results regarding the structure of the scale consisting of 19 items and a single factor in Figure 1 show that the single factor solution fits well. In the first analysis performed, it was seen that the fit index values (first model $\chi^2 / df = 2.63$, RMSEA = .080, CFI = .896 TLI = .883, SRMR = .075) were RMSEA. The next index, RMSEA, indicates how well the unknown but optimally selected coefficient estimates will fit into the data covariance matrix of the model (Byrne, 1998). The closer the CFI value is to 1, the better the model fit. In the new adjusted model that emerged with the modification between items 10 and 18, it was seen that the fit indices were as follows: $\chi^2 / df = 2.41$, RMSEA = .074, CFI = .911 TLI = .899, SRMR = .072. When the fit indices were examined, the second modification was performed between item 1 and item 10, since the TLI value was not acceptable, and all fit indices were found to be acceptable in the final model. Fit indices for the model are presented in the table below.

Table 5. Model Fit Values (MacCallum et al., 1996; Tabachnick, & Fidel, 2007)

Model fit indices	First model value	Second model value	Corrected model value	Good fit indices	Acceptable fit indices
χ^2	2.63	2.41	2.24	$0 \leq \chi^2/df \leq 2$	$2 \leq \chi^2/df \leq 5$
CFI	.896	.911	.922	$0,95 \leq CFI \leq 1,00$	$0,90 \leq CFI \leq 0,95$
RMSEA	.080	.074	.069	$0 \leq RMSEA \leq 0,05$	$0,05 \leq RMSEA \leq 0,08$
TLI	.883	.899	.911	$0,95 \leq TLI \leq 1,00$	$0,90 \leq TLI \leq 0,95$

SRMR	.075	.072	.067	$0 \leq SRMR \leq 0,05$	$0,05 < SRMR \leq 0,10$
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The model of SAS, which is formed according to the analysis results, is shown in Figure 1. The fit indices of the model show that the single factor structure of the model is acceptable.

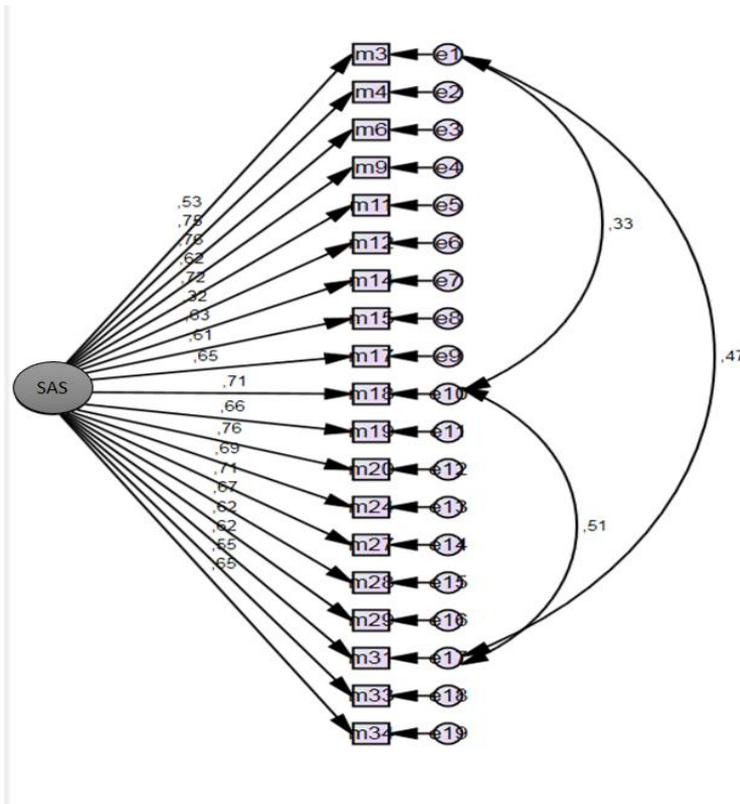


Figure 1. CFA Result of SAS

3.1.2. Criterion validity of SAS: In order to determine the criterion validity of the Successful Aging Scale, the scales applied to the elderly and thought to be similar to the Successful Aging Scale were examined; In order to determine the criterion validity, the Successful Aging Scale adapted into Turkish by Hazer and Özsungur (2017) and the Aging in Place Scale developed by Kalinkara and Kapıkıran (2017) were used.

Table 6. Correlative Relationships Between Successful Aging Scale and Successful Aging Scale (Hazer, & Özsungur, 2017) and the Aging in Place Scale

Factors	Successful Aging Scale (Hazer, & Özsungur, 2017) Total	Aging in Place Scale
SASTotal	.657**	.300**

p**<.001

As seen in Table 6, the total score of the Successful Aging Scale has a positive significant relationship with the total score of the Successful Aging Scale adapted by Hazer and Özsungur (2017) ($r = .657$; $p < .001$). It has been determined that SAS has a significant positive relationship with the Aging in Place Scale ($r = .300$, $p < .001$).

3.2. Findings Regarding the Reliability Analysis Results of SAS

The Cronbach alpha internal consistency coefficient of the total score of the SAS was calculated as .96 in the first study group and .90 (Table 7) in the second study group.

Table 7. Reliability Values

	Cronbach's Alpha	N of Items
First study group	.964	19
Second study group	.897	19

The item-total score correlation coefficients of the scale are presented to determine to what extent each item in the scale distinguishes individuals.

Table 8. Item-Total Correlation Results of SAS

	Item-total correlation coefficients
Item 1	.668**
Item 2	.646**
Item 3	.758**
Item 4	.819**
Item 5	.774**
Item 6	.737**
Item 7	.759**
Item 8	.741**
Item 9	.806**
Item 10	.800**
Item 11	.695**
Item12	.733**
Item 13	.780**
Item 14	.762**
Item 15	.828**
Item 16	.748**
Item 17	.802**
Item 18	.731**
Item 19	.761**

p ** < .001

In Table 8, it is seen that the item-total score correlation coefficients of the SAS vary between .65 and .83. If the item-total score correlation coefficients are positive .30 or above, it indicates that the items in the scale distinguish individuals well, exemplify similar behaviors, and the internal consistency of the scale is high (Büyüköztürk, 2011). When looking at this criterion, it can be said that the item distinctiveness of SAS is quite high.

4. Conclusion and Discussion

In this study, the 84-item scale, which was developed to measure the successful aging status of the elderly aged 60 and over, was applied to 600 elderly people, and the data obtained from 521 people were analyzed after the data extraction method. It is thought that the scale forms are obtained by people with high education level and some of them are obtained by online forms, so it enables less data to be extracted from the data set in the data extraction process.

When we look at the descriptive information of the elderly people reached within the scope of the research, it is seen that the proportion of women is higher, but the number of men is sufficient to represent the sample. It is noted that the age distribution of the participants is also quite homogeneous. The fact that 360 of the elderly people who were reached in the scale development study consisted of the elderly living in the province of Antalya and attending the Refreshment University and 188 of them were undergraduate and above graduates may constitute limitations in the implementation of the scale. However, it is seen that the rate of individuals participating from Aydın and Istanbul is 30.9%, which creates an advantage in terms of sample representation. When other measurement tools performed in the literature are examined, it is seen that there are differences in terms of descriptive values in studies conducted with the elderly (Reker, 2009; Robson et al., 2006; Strawbridge et al., 2002).

Because it's the basis of qualitative interviews conducted prior to Successful Aging Scale is thought to be an appropriate content to the culture of Turkey. The item pool of 198 items was reduced to 133 items in the first expert opinion, and an implementation form of 84 items was prepared at the second expert opinion stage. As a result of the validity and reliability analysis, Successful Aging Scale consisting of 19 items was created. Both the exploratory factor analysis and the confirmatory factor analysis reveal that the scale has a one-dimensional structure. Considering the eigenvalues of the components and the explained variance and the eigenvalues graph, the first factor's explanation of 61.42% of the total variance reveals that the scale can be interpreted as one-dimensional. The confirmatory factor analysis result shows that the data and the model

are compatible. This finding confirms the idea that the scale has a one-dimensional structure. These values obtained prove that the SAS is a valid measurement tool for measuring the successful aging of the elderly.

As a result of the exploratory and confirmatory factor analysis, the remaining 19 items were found to contain items from the themes of lifestyle, personal development, social participation, and coping mechanisms. In a study conducted by Han et al. (2015) in Korea, it was determined that the health of adults aged 45 and over is based on cognitive, physical and social support in order to determine the healthy living conditions; your depression levels; their self-esteem; perceived health conditions; ego integrations; their own achievements; It is seen that participation in leisure activities and levels of loneliness are measured. In the scale study developed in this study, it is seen that a pool of items was created at a point covering the topics of lifestyle, health, future, coping mechanisms, personal development and social participation of the elderly by making use of the data previously obtained through qualitative interviews. When the 19 items obtained as a result of the analysis are examined, it is seen that these items include self-efficacy perception, participation in leisure activities, productivity, enjoyment of life, hope, flexibility, well-being, and social connections.

In a study conducted by Zhang, Liu, and Wu (2018) with Chinese seniors, it was aimed to reveal the meaning of successful aging; It was found that psychosocial and economic well-being of the elderly, physical well-being and social support from adult children reveal three dimensions of successful aging. It is seen that these three headings cover the items such as being independent, having friends, living with children, good economic situation, range of motion, not suffering from illness, being able to work, being cared for by children, participating in social activities, living with a partner, caring for family members and being happy. In another scale developed by Lee, Kahana, and Kahana (2017) in the United States of America, a 4-factor structure was introduced; These factors took shape under the headings of active life, sources of well-being, positive spirituality and valuable relationships. In another Successful Aging Scale developed by Reker (2009) in Canada, Rowe and Kahn's triple definition of successful aging, Baltes and Baltes' Selection, Optimization and Compromise Approach, Schulz and Heckhausen's Primary and Secondary Control Approach, A 14-item scale was created based on Ryff's Psychological Well-Being Approach. On the basis of all these theories and approaches, it has drawn attention that there are topics such as not suffering from illness, high cognitive and physical function, social participation, adaptation, control of life, positive relationships, autonomy and self-acceptance. The Chinese version of the Successful Aging Scale was developed by Hsing-Ming, Mei-Ju, and Ho-Tang (2016), and it was observed in the study that Successful Aging Scale consisted of items representing physical, mental, social and spiritual well-being. However, it is seen that the Successful Aging Scale developed in this study is generally quite comprehensive but does not contain items that indicate addiction such as taking care or being away from illness. It is thought that this difference may have occurred since most of the elderly participating in the study are elderly people who attend the Refreshing University and currently lead an active life.

Successful Aging Scale and Aging in Place Scale were used in testing the criterion validity of the Successful Aging Scale. As a result of the correlation analysis obtained, the total score of the Successful Aging Scale is positively significant with the total score of the Successful Aging Scale adapted by Hazer and Özsungur (2017); It was also found that it has a significant positive relationship with the Aging-in-Place Scale. Considering the values taken by the correlations, it is seen that the relationship established with the Successful Aging Scale is close to high, and the In-Situ Aging Scale is at a moderate level close to low. When looking at the items of the Successful Aging Scale adapted by Hazer and Özsungur (2017), it is noteworthy that there are more common items than the Aging in Place Scale. However, the scale of the high level of relations between the two scales also reveals that Turkey has its own culture as the basis for the development of this scale.

The Cronbach alpha internal consistency coefficient of the total score of the SAS was calculated as .96 in the first study group and .90 in the second study group. An alpha coefficient of .80 and above indicates that the scale is highly reliable (Büyüköztürk, 2011; Kayış, 2010). These values obtained prove that the SAS is a reliable measurement tool in measuring the successful aging of the elderly.

5. Recommendations

Since this scale is carried out with a large sample of the elderly, it can be easily applied to individuals aged 60 and over. However, considering that most of the elderly who constitute the sample live in the city center,

it is recommended to consider the characteristics of the people when applying to the elderly living in rural areas.

6. References

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