JOURNAL of AGING and LONG-TERM CARE

RESEARCH ARTICLE

ISSN 2619-9017 | E-ISSN 2618-6535

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Validation of the Turkish Revised Algase Wandering Scale – Long Term Care Version (TR-RAWS-LTC) For People With Dementia in Türkiye

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2023, 6(2), 81-97 | **DOI**: 10.51819/jaltc.2023.1294510

Received: May 9, 2023 | Accepted: September 9, 2023 | Publish Online: September 10, 2023

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ABSTRACT

The Revised Algase Wandering Scale-Long-Term Care Version (RAWS-LTC) is a tool used to measure the level of wandering in people with dementia who live in Long-Term Care (LTC) facilities. This study aims to adapt RAWS-LTC to Turkish (TR) and determine its psychometric suitability. The scale was translated from its original language, English, into Turkish and then translated back to English by bilingual translators. It was then reviewed and evaluated according to translation problems and equivalence degrees. In this study, TR-RAWS-LTC was administered to eighty-six wanderers and fifty-six non-wanderers with dementia by nurses. The triple conceptual structure of TR-RAWS-LTC, consisting of persistent walking, eloping behavior, and spatial disorientation sub-dimensions, was confirmed by factor analysis. TR-RAWS-LTC total and three sub-dimension score levels were significantly different in wanderers with dementia compared to non-wanderers. A valid and reliable wandering assessment tool that can be easily applied by caregivers of individuals with dementia in long-term care has been brought to the Turkish literature.

KEYWORDS: Dementia; Alzheimer's Disease; Wandering Behavior; Assessment; Long-Term Care; Cross-Cultural Adaptation.

KEY PRACTITIONER MESSAGE

1. Wandering is a clinical issue that is little known by caregivers of individuals with dementia receiving LTC in Türkiye.
2. Conventional methods, such as inhibition of wandering behavior using physical and pharmacological constraints, are widely used in LTC.
3. Determining the degree of wandering behavior of dementia patients using RAWS-LTC will ensure the effectiveness of an individualized care plan.

INTRODUCTION

Dementia is an organic mental disorder characterized by impairment in memory, behavior, personality, reasoning, attention, spatial relationships, language, abstract thoughts, and other executive functions. The World Health Organization (2012) reported that dementia affects 36 million people worldwide, and this number is expected to increase to 66 million by 2030 and to 115 million by 2050. Intellectual decline in dementia initially manifests in consciousness and is usually progressive (MeSH., 2011). Dementia affects the brain, makes individuals vulnerable, and impairment in memory, communication, and orientation negatively affects daily life activities, causes difficulties in social functions, and reduces the quality of life (Ennis & Kazer, 2013). Today, models that support the physical, mental, social, or spiritual aspects of the care needs of individuals with dementia have gained significant momentum. Healthcare professionals have a caring approach that aims to maintain the patient's condition and manage symptoms during the variable course of dementia (Ødbehr et al., 2015).

Wandering in people with dementia is a common, challenging, and potentially dangerous behavior that can be distressing for both the person with dementia and their caregivers. It is a behavioral problem involving cognitive impairment related to abstract thinking, language, reasoning, and spatial skills, and its prevalence is estimated to be in the range of 11-24% in people with institutional dementia (Algase et al., 2001). In addition, the term wandering is used to describe agitated behaviors (Cohen-Mansfield & Libin, 2004). Two types of wandering are defined. In goal-directed wandering, the person may pretend to be searching for or doing something. In non-goal-directed wandering, the person usually has a short attention span and wanders aimlessly (Moore et al., 2009).

Wandering is one of the main reasons for early admission to institutional care. Numerous studies have shown that wanderers are likelier to fall, escape, get lost, and experience emotional distress. People with dementia with wandering behavior are at risk for eloping behavior, may enter unsafe or unsupervised areas unnoticed, and may get lost while carrying out a normal and permitted activity (Chung & Lai, 2011; Rowe et al., 2011). According to the Alzheimer's Disease International (2016), half of missing people with dementia who are not found within 24 hours experience severe injury or death. Approximately 60% of patients with Alzheimer's residing in the community have been reported missing at least once (Aud, 2004). It has been reported that 30% of dementia patients living in the community have wandering behavior, and the prevalence of wandering in depressed patients is 8.4 times higher than in

those without (Jeong et al., 2016).

Physical and pharmacological restraints have traditionally been employed to prevent wandering (Dewing, 2011). Nevertheless, it has been highlighted that these restrictions are ineffective and contribute to higher rates of pressure sores, anxiety, physical violence, falls, morbidity, and mortality (Raetz, 2013). A review study found that many high-tech (positioning systems, radio-frequency identification-RFID, global positioning system-GPS, radio frequency-RF, alarm and surveillance tools, navigation sensors, navigator tools, distraction/direction tools) and low-tech strategies (music therapy, doll therapy, exercise programs, mirror in front of the exit door, blind/fabric barriers, signage, door mural, gradual strengthening, distraction techniques, safe return programs, aromatherapy, reality orientation, lighting/noise/temperature level, pharmaceutical applications, and locked units/physical restraints) are available and effective for managing wandering-related negative outcomes in people with dementia (Neubauer et al., 2018). However, it was also stressed that the benefits of walking, such as circulation, oxygenation, and reduced risk of contractures, should not be lost to prevent residents from wandering (Lai & Arthur, 2003).

Adopting an individualized care plan that addresses the unique physical and psychosocial needs of wanderers represents a more compassionate and efficient approach. Nursing care plans for wandering should include environmental changes, technology, safety, physical interventions, psychosocial interventions, and training (Aud, 2004). A collaborative team approach involving healthcare providers, families, and other affected residents should be employed to effectively manage wandering behavior (Robinson et al., 2007). To design nursing interventions to help older adults with dementia with wandering behavior, it is first necessary to understand the nature/characteristics of their wandering behavior. This is because wandering has a pattern, frequency, and temporal aspect. Creating a positive care environment can help mitigate the risks associated with wandering (Gu, 2015). In addition to having sufficient staff to supervise wandering residents, it has been suggested that wandering individuals can be supported by incorporating the pathways of wandering into care. Designing corridors that go around in a circular loop and placing simple visual cues or objects along this route can facilitate therapeutic walking (Marquardt et al., 2014).

Wandering or aimless walking is common in Long-Term Care (LTC) homes for older adults with dementia. Healthcare providers often view wandering as a problem that disrupts their care routine, and they may try to control or prevent it (Dewing, 2005; Halek & Bartholomeyczik, 2012). However, little is known about how older adults with dementia

themselves view wandering (Tanner, 2012). A recent study by Adekoya and Guse (2019) found that older adults with mild to moderate dementia in LTC often conceptualized wandering as an enjoyable, beneficial, and purposeful activity. The study also found that wandering could be a way for older adults to express their emotions or to cope with stress.

It is important to estimate the degree of wandering behavior of people with dementia in LTC. For this purpose, two tools stand out in the literature. One of them is the Wandering Screening Tool-WST, a risk diagnostic tool Dewing (2005) developed for nurses to identify those at risk for wandering and develop appropriate care. The WST is a two-part tool that assesses the risk of wandering in people with dementia. Part A of the WST asks questions about the person's medical history, cognitive function, and behavior. If the person answers yes to any of the questions in Part A and they have a diagnosis of dementia (especially Alzheimer's), they are considered to be at risk of wandering. Part B of the WST asks questions about the person's environment and their access to safety measures. If the person answers yes to any of the questions in Part B, they are considered to be likely to engage in some form of wandering, and they may be at risk of engaging in a more risky type of wandering. It is important to note that the WST does not have any methodological implications.

The other is the Revised Algase Wandering Scale-Long Term Care version (RAWS-LTC) (Algase et al., 2004). The RAWS-LTC is a useful tool for healthcare providers to identify people who are at risk of wandering and to develop interventions to manage wandering behavior. Martin et al. (2015) adapted the RAWS-LTC into French and found it to be a valid instrument. However, in Türkiye, wandering has never been systematically studied in older adults with dementia in LTC, and no scale specific to wandering behavior was developed. Technological observational methods are becoming more common for measuring wandering, but they can be expensive and time-consuming. This study aims to address this by investigating the psychometric properties of the RAWS-LTC, a less expensive and time-consuming method, in older people with dementia in Türkiye.

METHOD

Design and Setting

This study adapted the RAWS-LTC for use in Türkiye with older adults with dementia living in long-term care. The study sample consisted of 416 participants from six centers in two provinces. Inclusion criteria were age 65 or older, a diagnosis of dementia, and no musculoskeletal problems that prevented walking. The sample size of 150 was sufficient for factor analysis, as this is within the recommended range of 5-10 times the number of items in the scale, which

was 15 in this study (Buyukozturk, 2002). Based on this information, the study sample was planned to include at least 95 older adults, five times the scale with 19 items. Of the residents in these institutions, 139 older adults with dementia who met the inclusion criteria were divided into two groups (86 wanderers and 56 non-wanderers). The answers given to the 20th item of the RAWS-LTC were decisive in assigning the participants into respective groups. If "yes and this is a problem" was given as a response to the item "the resident is a wanderer," the person was included in the "wanderer" group if "absolutely not," "sometimes," "yes but this is not a problem" was given as a response, then the person was included in the "non-wanderer" group.

Study Instruments

The data collection tools were prepared online using "Google Forms," and sent electronically to the nurse staff in the studied institutions. Nurses answered the Personal Information Form and Ascertain Dementia 8 (AD-8) in addition to the RAWS-LTC for the older adult. The data were obtained from 5 nurses working in shifts in the institution and observing the older adults at different times during the day. Nurses filled out the forms related to the older person they cared for the most. The data of the study were obtained between May and September 2022.

Personal Information Form

The form includes ten items about the age, gender, duration of institutional care received by the older adults, frequency of visits by relatives, phone contacts with relatives, and lifestyle characteristics of the older adults who participated in the research.

The Revised Algase Wandering Scale – Long-Term Care Version (RAWS-LTC)

The RAWS-LTC is a tool that assesses wandering behavior in people with dementia. This revised version is derived from a more comprehensive version of the Algase Wandering Scale (AWS) (Algase et al., 2001). The RAWS-LTC includes three sub-scales: persistent walking (e.g., ≠ 1. Resident has a reduced amount of spontaneous walking), eloping behavior (e.g., ≠ 10. Resident attempts to leave their authorized area), and spatial disorientation (e.g., ≠ 14. Resident gets lost). Each subscale has a total of 19 items, 9, 4, and 6 items, respectively. The items on the RAWS-LTC are rated on a scale of 1 to 4, with 1 indicating "not at all" and 4 indicating "very much." A higher score indicates more wandering behavior. To calculate a usable score, at least 14 of the 19 items must have a valid rating marked. The scale is completed by a nurse who has given care to the person with dementia at least several times. The nurse gives his/her answers in line with her observations about her patient during the previous week.

Ascertain Dementia 8 (AD-8)

The AD-8 was used to screen for cognitive function impairment. The AD-8 has been developed to

differentiate between normal cognitive decline and early-stage dementia. A short and straightforward test, the AD-8 can be easily applied by patients, caregivers, or other practitioners. The AD-8 contains eight questions that ask the participant to rate (Yes or No) changes in memory, problem-solving skills, orientation, and daily activities. The number of Yes responses is calculated to obtain the AD-8 score (Galvien et al., 2005; Galvin et al., 2006; Galvin et al., 2007a, 2007b). Bayram et al. (2021) showed the distinctiveness of AD-8 as .92, sensitivity as 75.8, and specificity as 96.6 in older adults receiving institutional care and reported that it could be used to diagnose dementia when the total score is ≥ 5.50.

Data Analysis

The data was analyzed using IBM SPSS 21.0 statistical software. Continuous variables were presented as means, and categorical variables were presented as numbers and percentages. Construct validity was assessed using exploratory factor analysis (EFA). The Kaiser-Meyer-Olkin (KMO) and Bartlett's Sphericity test results, the common factor variance values of the items, the eigenvalue scree plot, the principal components analysis results, and the "varimax" rotation technique were used to identify the factors to be interpreted. The item-total test score correlation and Cronbach's alpha reliability coefficient were calculated to determine the reliability of the scale. The time invariance of the scale was evaluated by correlating the scores obtained from a test-retest application with an interval of four weeks. The scores obtained from the scale according to specific characteristics of the sample were compared using Pearson's correlation coefficient, the independent samples t-test, and the Mann-Whitney U test. A p-value of $< .05$ was considered statistically significant.

Ethical Considerations

The study was approved by the Non-Interventional Health Research Ethics Committee of a state university (Protocol No: 2020/209, Date: September 21, 2020). Written permission was obtained from the Ministry of Family, Labor, and Social Services to conduct research in the institutions. Since the older adults included in the study were cognitively disabled, consent was obtained from their guardians for their participation in the research.

RESULTS

Findings Related to the Characteristics of the Groups

The average age of the wanderers and non-wanderers who participated in the research was 79 (7.9) and 76 (9.0), respectively. There were 51 (59%) males in the wanderer group and 36 (68%) males in the non-wanderer group. The mean duration of institutional care in both groups was 40 (36.6) and 30 (41.6) months. Wanderer and non-wanderer

individuals with dementia were similar in terms of gender, duration of institutional care, frequency of visits by relatives, room-sharing status, lifestyle (wake-up and bedtime), and participation in social interaction activities (indoors and outdoors) ($p > .05$), but different in terms of mean age and frequency of phone contacts with relatives ($p < .05$) (see Table-1).

Findings on the Validity and Reliability of the TR-RAWS-LTC

Semantic Equivalence

The translation-back translation method was used to translate the RAWS-LTC into Turkish. For the translation and inter-cultural adaptation of the scale, the translation of the scale from the English version into Turkish was carried out independently by two Turkish experts (a public health nursing faculty member and an English lecturer) who were fluent in both languages. Then, a version agreed upon by the researchers was created using these two translations. The translation was submitted to an expert committee for cultural equivalence and content validity.

The experts focused on the conceptual structure as well as the linguistic equivalence of the items. A 10-member expert committee was used to assess the content validity of a scale to measure wandering in older adults with dementia. The committee consisted of experts in sociology, internal medicine nursing, psychiatric nursing, public health nursing, neurology, and long-term care nursing. The committee used the Davis technique to rate the items on a 1-4 point scale, with 1 being "not appropriate" and 4 being "appropriate." The number of experts who rated each item as "appropriate" or "slightly revised" was divided by the total number of experts to obtain the Content Validity Index (CVI) value. The CVI value of the scale was found to be .89. The CVI values of the scale items were found to be in the range of .80 and 1.00. The Turkish version was revised after the expert opinion and translated back into English by a third bilingual translator. This version was then compared with the original English RAWS-LTC, and semantic equivalence was evaluated between back-translated and translated items.

Pilot Application

The TR-RAWS-LTC was administered to nine nurses in the pilot application phase to assess the acceptability and comprehension of the tool. On average, it took approximately 15 minutes for the nurses to fill out the questionnaire. In this step, there were no items that were not understood, unanswered, or considered non-applicable.

Application

The online form of TR-RAWS-LTC was created and sent electronically to the nurses in the institution where the study was conducted.

Internal Consistency

The Cronbach's alpha coefficient of The TR-RAWS-LTC was .90. The item-total score correlations ranged from .375 to .704, which indicates that all of the items are contributing to the overall score of the scale. Since there were no items with an item-total score correlation below .30, all of the items were included in the exploratory factor analysis (EFA).

Inter-Rater Reliability

To assess the inter-rater reliability of the TR-RAWS-LTC, two nurses independently assessed 19 residents with dementia using the scale. The Intraclass Correlation Coefficient (ICC) was .95, which indicates excellent agreement between the two nurses. The 95% confidence interval (CI) for the ICC was [.93, .97], which means that there is a 95% probability that the true ICC lies within this range.

Test-Retest Reliability

The test-retest reliability of the TR-RAWS-LTC was assessed by having the same staff conduct the measurements and fill out the questionnaire on 19 residents one month after the initial assessment. The test-retest correlation coefficient was found to be .96, which indicates excellent stability over time.

Construct Validity

Exploratory factor analysis (EFA) was conducted to assess the construct validity of the TR-RAWS-LTC. The principal component analysis method was used with varimax rotation. The data was found to be suitable for EFA, with a Cronbach's alpha coefficient of .899, a KMO value of .810, and a Bartlett's value of 2012.794. The EFA results showed that the TR-RAWS-LTC items could be grouped into three factors: (1) Persistent walking (items 1-9): This factor explained 40% of the variance, with factor loadings ranging from .56 to .85. (2) Eloping behavior (items 10-13): This factor explained 10% of the variance, with factor loadings ranging from .66 to .87. (3) Spatial disorientation (items 14-19): This factor explained 12% of the variance, with factor loadings ranging from .72 to .89. The results of the EFA suggest that the TR-RAWS-LTC has good construct validity. The three factors identified by the EFA are consistent with the theoretical constructs of persistent walking, eloping behavior, and spatial disorientation (see Table-2).

Each sub-scale of the TR-RAWS-LTC was highly significantly correlated with the total score ($r = .72$ to $r = .80$, $p < .001$). At the same time, moderate and significant correlations were found between spatial disorientation and persistent walking ($r = .27$, $p < .01$), and moderate and highly significant correlations were found between eloping behavior and persistent walking ($r = .36$, $p < .001$) (see Table-3).

The AD-8 ($t = 2.778$, $p < .01$), TR-RAWS-LTC total ($Z = -6.223$, $p < .001$), and persistent walking ($t = 5.205$, $p < .001$), eloping behavior ($t = 4.429$, $p < .001$) and spatial disorientation ($t = 4.970$, $p < .001$) sub-scale scores were found to be significantly different from those with non-wandering dementia (see Table-4).

Table-1. Distribution of socio-demographic characteristics of the groups.

Characteristics	W+ (n=86)		W– (n=53)		p
	n	%	n	%	
Gender					
Male	51	59.3	36	67.9	1.041*
Female	35	40.7	17	32.1	.308
Age (Mean±SD)	79.41±7.93		76.11±8.97		-2.244** .025
Duration of institutional care, months (Mean±SD)	40.08±35.6		36.08±41.56		.604*** .547
Frequency of visits by relatives					
Monthly	14	16.3	6	11.3	1.671*
Less than once a month	61	70.9	37	69.8	.644
Weekly	2	2.3	1	1.9	
Once in two to three weeks	9	10.5	9	17.0	
Frequency of phone contacts with relatives					
Monthly	13	15.1	5	9.4	19.049*
Less than once a month	49	57.0	16	30.2	.001
Weekly	5	5.8	15	28.3	
Everyday	14	16.3	14	26.4	
Once in two to three weeks	5	5.8	3	5.7	
Residing person in the same room					
Spouse	3	3.5	-	0.0	2.191*
Roommate	43	50.0	30	56.6	.334
Alone	40	46.5	23	43.4	
Lifestyle model: Wake-up time:					
Before 7 A.M.	63	73.3	36	67.9	.455*
After 7 A.M.	23	26.7	17	32.1	.500
Lifestyle model: Bed-time:					
Before 9 P.M.	27	31.4	13	24.5	.754*
After 9 P.M.	59	68.6	40	75.5	.385
Participation in outdoor activities[1]					
Yes	45	36.3	30	56.6	.242*
No	41	63.7	23	43.4	.623
Participation in indoor activities[2]					
Yes	73	84.9	48	90.6	.939*
No	13	15.1	5	9.4	.332

Notes. * Pearson Chi-Square, ** Mann-Whitney-U test, *** Independent Samples t-test, 1 Sightseeing/walking, strolling in parks, going to coffee houses, going to mosques, etc., 2 Chatting, doing manual work, playing games such as backgammon, Rummikub, watching television, listening to the radio, performing religious worship, W+ : Wanderer group, W- : Non-wanderer.

Table-2. TR-RAWS-LTC rotated factor analysis.

Factor 1	Factor 2	Factor 3
≠ 1 .751	≠ 10 .663	≠ 14 .779
≠ 2 .561	≠ 11 .842	≠ 15 .816
≠ 3 .772	≠ 12 .821	≠ 16 .889
≠ 4 .697	≠ 13 .872	≠ 17 .827
≠ 5 .598		≠ 18 .715
≠ 6 .733		≠ 19 .865
≠ 7 .772		
≠ 8 .790		
≠ 9 .853		
	Eigenvalue	
7.027	1.938	3.443
	Variance explained (%)	
36.983	10.202	18.123
	Cronbach's Alpha	
.898	.907	.862

DISCUSSION

General Characteristics of the Studied Population

This study presents methodological results on the validity and reliability of the RAWS-LTC, a measurement tool that can identify older adults with dementia with wandering behavior in institutional care in Türkiye.

The 86 wanderers and 53 non-wanderers who participated in the study were homogeneous regarding other characteristics except for mean age and frequency of phone contacts with their relatives. In this study, wanderers were predominantly male (59%). In their study, Martin et al. (2015) found a higher proportion of wandering in females (77%) than males. In a research conducted by Klein et al. (1999), it was shown that the propensity for wandering behavior was nearly twice as high in males compared to women. The wandering behavior, which is predominant in males, can also be explained by the predominance of male patients in the institutional care centers where the study was conducted.

Table-3. Correlations of overall score of AD-8 and TR-RAWS-LCT and three sub-scales.

	Persistent Walking	Eloping Behavior	Spatial Disorientation
Overall TR-RAWS-LTC	.73*	.80*	.72*
Spatial disorientation	.27*	.44*	
Eloping behavior	.40*		

Notes. * p < .001, ** p < .01.

This study found that wandering patients were older than non-wandering patients. This finding is consistent with previous research, which has shown that age is negatively correlated with wandering (Algase & Song, 2008; Martin et al., 2015). The study also found that the cognitive level scores determined by AD-8 were higher in wanderers than non-wanderers. The cutoff value of ≥ 5.50 for AD-8 was used in this study, as determined by Bayram et al. (2021). This finding is also consistent with previous research, which has

shown that people with dementia who wander tend to have lower cognitive levels (Martin et al., 2015; Son et al., 2006; Song & Algase, 2008).

Table-4. Group differences of the AD-8 and TR-RAWS-LTC and sub-scales between non-wanderers and wanderers.

	W+(n=86)	W–(n=53)	p
AD-8 (Mean±SD)	6.94±.99	6.42±1.23	2.778*** .006
Persistent Walking (Mean±SD)	2.36±.60	1.80±.63	5.205*** .000
Eloping Behavior (Mean±SD)	1.98±.62	1.51±.61	4.429*** .000
Spatial Disorientation (Mean±SD)	1.86±.72	1.33±.52	4.970*** .000
Total (Mean±SD)	2.07±.44	1.54±.44	-6.223** .000

Notes. ** Mann-Whitney U-Test, ***Independent Samples t-test, W+: Wanderer group, W-:Non-wanderer.

In the wanderer group, persistent walking was more important than eloping behavior and spatial disorientation, with scores of 2.36, 1.98, and 1.86, respectively. This finding is consistent with Martin et al. (2015), who found that eloping behavior was less important than persistent walking and spatial disorientation, with scores of 1.62, 2.50, and 2.32, respectively. Algase et al. (2007) reported mean scale scores for wanderers; the mean scale scores were 2.72 for the overall scale, 3.28 for persistent walking, 2.19 for eloping behavior, and 2.69 for spatial disorientation.

Psychometric Properties of TR- RAWS-LTC

The content validity of the TR-RAWS-LTC was high, with a CVI of .89. The Cronbach's alpha coefficient for internal consistency was also high, with values between .80 and 1.00 for both the total scale and the factor sub-scales (Polit & Beck, 2006). Martin et al. (2015) found that Cronbach's alpha coefficient of the French RAWS-LTC was .92. For the AWS, Cronbach's alpha coefficients were .93 for the overall scale, .94 for persistent walking, .87 for eloping behavior, and .88 for spatial disorientation (Algase et al., 2001). These results suggest that the TR-RAWS-LTC is a reliable and valid measure of wandering behavior in older adults with dementia.

The item-total score correlations of the TR-RAWS-LTC were in the range of .375-.704, which is considered to be a sufficient level of correlation (> .30) (Buyukozturk, 2008). The test-retest correlation coefficient was .96, which is also considered to be a high level of correlation (> .70) (Karakoc & Donmez 2014). These results suggest that the TR-RAWS-LTC is a reliable measure of wandering behavior.

The majority of the nurses who participated in this study (62%) stated that they had worked with the older adult they evaluated many times. This suggests that the caregivers who completed the TR-RAWS-LTC had the opportunity to observe the wandering behavior of the older adults in their care. The factor analysis of the TR-RAWS-LTC confirmed the three-factor structure of the original scale,

which includes persistent walking, eloping behavior, and spatial disorientation. The factor loadings of the items on the three factors were all at least .30, and the difference between the factor loadings of an item on more than one factor was at least .10 (Karaman et al., 2017). The total variance explained by the three-factor structure is 65%. The fact that each sub-scale had highly significant correlations with the TR-RAWS-LTC total score (.72-.80) and that the relationships between the sub-scales were at minimum to medium significance levels supported the construct validity. This suggests that the items on the TR-RAWS-LTC are measuring three distinct constructs of wandering behavior.

Overall, the results of this study suggest that the TR-RAWS-LTC is a reliable and valid measure of wandering behavior in older adults with dementia. The scale has a high content validity, good internal consistency, and good test-retest reliability. The factor analysis of the scale confirmed the three-factor structure of the original scale, and the correlations between the sub-scales support the construct validity of the scale.

CONCLUSION

In the study, cognitive impairment as measured by AD-8 and total wandering as measured by TR-RAWS-LTC and its sub-scales of persistent walking, eloping behavior, and spatial disorientation were significantly higher in wanderers compared to non-wanderers, which strengthened the validity and reliability of the scale as a valid and reliable tool for the Turkish population by distinctively revealing the wandering behavior.

Due to the nature of dementia and the complexity of its effect on cognitive processes, individuals' wandering behaviors may vary periodically. Therefore, these characteristics may have affected the data obtained at the time of data collection. Another limitation of this study is that a short assessment tool such as the AD-8 was used to determine the cognitive level. However, the nursing staff in the studied institutions stated that they could not spare time for a diagnostic tool to be completed in a long time due to time constraints, especially in the preliminary interviews, so the AD-8 was used. Since there were no medical records of the dementia type of the patients, differential results in various dementia types could not be revealed. The TR-RAWS-LTC is a reliable and valid measure of wandering behavior in older adults with dementia. The scale has a high content validity, good internal consistency, and good test-retest reliability. The factor analysis of the scale confirmed the three-factor structure of the original scale, and the correlations between the sub-scales support the construct validity of the scale. In addition, the fact that 66% of the nurses participating in this study stated that they "once attended dementia-related courses," and 66% of them believed that

they were "at the beginning stage of providing care for people with dementia" revealed the necessity of providing continuous training on the care of patients with dementia for nurses working in LTC in Türkiye.

Disclosure of Potential Conflicts of Interest: The authors' declaration of no conflicts of interest is important because it allows readers to be confident that the findings of the study are not biased. If the authors had a conflict of interest, readers might be more likely to question the validity of the findings. All other authors declare no competing interests.

Author Contributions: The research was initiated by Serap Bayram, who also offered guidance and support in the realm of statistical analysis. The data was gathered by Serap Bayram and Ozlem Altinbas Akkas. Both authors provided main funding in order to support their research pursuits. Both authors provided critical evaluations and discussion of the manuscript.

Funding: The authors of this article did not receive any financial support for their research, authorship, or publication.

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Supplementary File-1. The Turkish Revised Algase Wandering Scale – Long Term Care Version (TR-RAWS-LTC)

Revize edilmiş Algase Gezinme Ölçeği (RAGÖ) - Uzun Süreli Bakım Versiyonu

Ofis tarafından doldurulacaktır: Katılımcı No#_____ Kurum No# _____ Tarih / /

Lütfen bu yaşlı bireyi en iyi tanımlayan ifadenin yanına bir onay işareti koyun.

SÜREKLİ YÜRÜME

1. Yaşlı kendiliğinden yürüyüş miktarında azalmaya sahiptir
☐ aynı yaşta ve yeteneğe sahip diğerleriyle aynı veya daha fazla yürür
☐ aynı yaş ve yeteneğe sahip diğerlerinden daha az yürüyor
☐ sadece minimal yürüyüşler, örn. banyoya gitmek
☐ istenmedikçe kendiliğinden yürümez

2. Yaşlı kendiliğinden yürüyüş miktarında artışa sahiptir
☐ aynı yaşta ve yeteneğe sahip diğerleriyle aynı şekilde yürür
☐ ortalamadan belirgin bir şekilde daha fazla yürür, ancak aralıklarla oturur
☐ ortalamadan daha belirgin bir şekilde yürür, nadiren oturur
☐ ortalamadan belirgin bir şekilde daha fazla yürür, asla oturmaz

3. Yaşlı kendi başına yürür
☐ sadece yönlendirildiğinde
☐ gün boyunca bazen
☐ gün boyunca sıkça
☐ gün boyunca neredeyse sürekli

4. Yaşlı huzursuzca dolaşır
☐ asla
☐ birkaç kez
☐ düzenli ama her gün değil
☐ günlük şekilde

5. Yaşlı yukarı ve aşağı adımlar
☐ asla
☐ birkaç kez
☐ düzenli ama her gün değil
☐ günlük şekilde

6. Yaşlı uyandıktan sonra yani, kahvaltıdan önceye kadar dolaşır
☐ asla
☐ aynı yaş ve yeteneğe sahip diğerlerinden daha az
☐ aynı yaş ve yeteneğe sahip diğerleriyle aynı
☐ aynı yaş ve yetenekteki diğerlerinden daha fazla

7. Yaşlı kahvaltı ve öğle yemeği arasında dolaşır
☐ asla
☐ aynı yaş ve yeteneğe sahip diğerlerinden daha az
☐ aynı yaş ve yeteneğe sahip diğerleriyle aynı
☐ aynı yaş ve yetenekteki diğerlerinden daha fazla

8. Yaşlı öğle yemeği ve akşam yemeği arasında dolaşır
☐ asla
☐ aynı yaş ve yeteneğe sahip diğerlerinden daha az
☐ aynı yaş ve yeteneğe sahip diğerleriyle aynı
☐ aynı yaş ve yetenekteki diğerlerinden daha fazla

9. Yaşlı akşam yemeğinden sonra yani, yatma zamanından önceye kadar dolaşır
☐ asla
☐ aynı yaş ve yeteneğe sahip diğerlerinden daha az
☐ aynı yaş ve yeteneğe sahip diğerleriyle aynı
☐ aynı yaş ve yetenekteki diğerlerinden daha fazla

KAÇMA DAVRANIŞI

10. Yaşlı yerleşim bölgelerini terk etme girişiminde bulunur
☐ asla
☐ birkaç kez
☐ düzenli ama her gün değil
☐ günlük şekilde

11. Yaşlı kaçar
☐ asla
☐ birkaç kez
☐ düzenli ama her gün değil
☐ günlük şekilde

12. Yaşlı yetkisi olmayan alanlara girer
☐ asla
☐ birkaç kez
☐ düzenli ama her gün değil
☐ günlük şekilde

13. Yaşlı fark edilmeden huzurevi alanından ayrıldıktan sonra geri getirildi
☐ asla
☐ sadece bir kere
☐ bir kereden fazla ama sık değil
☐ sık sık

MEKANSAL BOZUKLUK

14. Yaşlı kaybolur
☐ asla
☐ birkaç kez
☐ düzenli ama her gün değil
☐ günlük şekilde

15. Yaşlı yardım olmadan banyonun yerini bulamaz
☐ yardım gerektirmiyor
☐ bazen yardım gerektirir
☐ genellikle yardım gerektirir
☐ her zaman yardım gerekli

16. Yaşlı yardım olmadan yemekhanenin yerini bulamaz
☐ yardım gerektirmiyor
☐ bazen yardım gerektirir
☐ genellikle yardım gerektirir
☐ her zaman yardım gerekli

17. Yaşlı yardım almadan kendi odasını bulamaz
☐ yardım gerektirmiyor
☐ bazen yardım gerektirir
☐ genellikle yardım gerektirir
☐ her zaman yardım gerekli

18.Yaşlı amaçsızca yürür
☐ her zaman tanımlanabilir bir yönü / hedefi var
☐ genellikle tanımlanabilir bir yönü / hedef vardır
☐ bazen tanımlanabilir bir yönü / hedef var
☐ hiçbir zaman tanımlanabilir bir yönü / hedefi olmaz

19.Yaşlı yalnız yürürken, engellere ve diğer insanlara çarpar
☐ asla
☐ birkaç kez
☐ düzenli ama her gün değil
günlük şekilde

DEĞERLENDİRME MADDELERİ

20. Yaşlı başıboş dolaşır
☐ kesinlikle hayır
☐ zaman zaman
☐ evet, ama sorun değil
☐ evet ve bu bir sorun

21. Ben
☐ bir bakım çalışanı
☐ bir hemşire
☐ bir sosyal çalışan
☐ bir diyetisyen veya diyet yardımcısı
☐ bir fiziksel terapist
☐ bir birim memuru
☐ diğer

22. Ben bu yaşlı ile çalıştım
☐ sadece bugün
☐ bugün ve bir kerede öncesinde
☐ birkaç defa
☐ bir çok zaman

23. Demans ile ilgili derslere katıldım
☐ asla
☐ bir zamanlar
☐ birkaç defa
☐ sık sık

24. Kendimin
☐ demans ile ilgili deneyimsiz olduğumu düşünüyorum
☐ demanslı kişilerin bakımında başlangıç aşamasında biri olduğumu düşünüyorum
☐ demans bakımı konusunda deneyimli olduğumu düşünüyorum
☐ demans bakımı konusunda uzman olduğumu düşünüyorum

Bu sakin hakkında yapmak istediğiniz herhangi bir yorum var mı?