

Original Article

Development and Psychometric Validation of the Multidimensional Self-Care Scale for Older Adults (MSCS-OA): A Person-Centred Approach

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Abstract

Background: Self-care in later life constitutes a central determinant of healthy aging, functional independence, and psychological well-being. Despite its recognized importance, existing assessment approaches remain predominantly function-focused, frequently conflating self-care with disability and autonomy. As a result, psychological, preventive, and existential dimensions—core elements of person-centred models of aging—are systematically underrepresented in the measurement of self-care among older adults.

Objectives: The present study aimed to develop and psychometrically validate the Multidimensional Self-Care Scale for Older Adults (MSCS-OA), a person-centred instrument designed to operationalize self-care as a multidimensional and lived process in community-dwelling older adults.

Methods: An initial pool of 60 items was administered to a national sample of community-dwelling older adults in Greece ($N = 608$). To ensure psychometric rigor and reduce overfitting, the sample was randomly split for exploratory factor analysis (EFA; $n = 202$) and confirmatory factor analysis (CFA; $n = 406$). EFA was conducted using principal axis factoring on polychoric correlations, followed by CFA using weighted least squares mean and variance adjusted (WLSMV) estimation. Internal consistency was evaluated using Cronbach's α and McDonald's ω , while discriminant validity was examined using the Fornell–Larcker criterion and the heterotrait–monotrait ratio.

Results: Both EFA and CFA supported a coherent seven-factor structure encompassing Functional Independence, Daily Well-Being and Positive Resources, Psychological Distress and Symptoms, Prevention and Healthcare Use, Oral Hygiene, Spirituality/Religiosity, and Meaning and Life Purpose. Model fit indices indicated good to excellent fit, and reliability estimates ranged from acceptable to excellent across subscales. Inter-factor associations were theoretically meaningful, supporting the multidimensional organization of self-care.

Discussion: The findings reinforce a multidimensional understanding of self-care that extends beyond functional capacity to include psychological regulation and existential resources central to person-centred care in later life.

Conclusions: The MSCS-OA provides a psychometrically robust and conceptually integrated tool for assessing self-care in older adulthood. By aligning measurement with person-centred conceptions of aging,

the scale offers important implications for research, clinical assessment, and the development of individualized, person-centred care strategies.

Keywords: Self-care; Older adults; Person-centred care; Scale development; Psychometric validation; Healthy aging

Background

Self-care is a key determinant of healthy aging, functional independence, and quality of life among older adults. Evidence indicates that effective self-care and self-management are associated with reduced morbidity, fewer hospitalizations, and better health outcomes, particularly among individuals living with chronic conditions and multimorbidity (Lorig and Holman, 2003; Richard and Shea, 2011; World Health Organization, 2015). Consequently, self-care has become an important component of public health strategies aimed at promoting healthy aging and supporting the sustainability of healthcare systems in aging societies (Lawless et al., 2021; González-González and Requena, 2023).

Contemporary perspectives conceptualize self-care as a multidimensional process extending beyond the performance of daily activities. It encompasses health-promoting behaviours, chronic disease management, emotional regulation, engagement with preventive healthcare, and the maintenance of meaningful social relationships (Riegel et al., 2021; Audulv et al., 2025). These dimensions contribute to autonomy, resilience, and well-being in later life, whereas inadequate self-care has been linked to poorer physical, psychological, and social outcomes (Alqahtani and Alqahtani, 2021; Safaiyan et al., 2023).

Despite this broader understanding, the assessment of self-care in older adults remains fragmented. Commonly used measures such as Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) primarily assess functional performance and independence (Katz et al., 1963; Lawton and Brody, 1969).

Although valuable for evaluating care needs, they do not adequately capture psychological well-being, preventive health behaviours, social connectedness, or existential dimensions such as meaning and purpose in life (El-Osta et al., 2023). Consequently,

important aspects of self-care remain underrepresented in existing assessment approaches.

Current person-centred models emphasize that self-care is a dynamic and context-dependent process shaped by functional, psychosocial, and existential factors (World Health Organization, 2015; McCance and McCormack, 2025). Qualitative and quantitative studies consistently identify psychological well-being, social relationships, spirituality, and meaning in life as integral components of self-care in later life (Casey et al., 2024; Yousefi Afrashteh et al., 2024). However, these dimensions are largely absent from most standardized instruments.

Systematic reviews further highlight considerable heterogeneity among available self-care measures regarding theoretical foundations, domain coverage, and psychometric quality (Matarese et al., 2017; El-Osta et al., 2023; Lawless et al., 2023).

Most instruments focus on isolated aspects of self-care and fail to provide a comprehensive assessment of its multidimensional nature, limiting both research and person-centred clinical practice (Luciani et al., 2022; Lawless et al., 2023).

Objectives: Guided by person-centred care principles, the present study conceptualized self-care as a multidimensional process embedded in everyday life and shaped by individuals' experiences, agency, and perceptions of aging (Kitwood, 1997; McCormack and McCance, 2017; Martela and Steger, 2016). To address limitations in existing measurement approaches, the study aimed to develop and psychometrically validate the Multidimensional Self-Care Scale for Older Adults (MSCS-OA) in a national sample of community-dwelling older adults.

The instrument was designed to provide a comprehensive assessment of self-care and support research, clinical evaluation, and person-centred care planning in later life.

Methods

Participants: A total of 608 community-dwelling older adults from across Greece participated in the study. Eligible participants were aged ≥ 65 years, able to communicate in Greek, and free from severe cognitive impairment or acute psychiatric illness. Participants were recruited through community centres, primary healthcare units, and senior associations using convenience sampling.

Procedure: The study was conducted in accordance with the Declaration of Helsinki (World Medical Association, 2013) and approved by the Ethics and Research Deontology Committee of the University of Ioannina (Protocol No. 27934; 24 July 2024). Written informed consent was obtained from all participants. Data were collected through face-to-face interviews conducted by trained researchers following a standardized administration procedure. All responses were anonymized prior to analysis.

Practice-informed rationale and instrument development: The development of the instrument was informed by person-centred models of aging and extensive experience in community-based aging research. Existing self-care measures were reviewed and found to focus predominantly on functional ability while providing limited coverage of psychological, social, and existential aspects of self-care.

Based on theoretical and empirical evidence, an initial pool of 60 items was developed covering daily functioning, personal hygiene, preventive healthcare use, emotional well-being, psychological symptoms, spirituality/religiosity, and meaning in life. Items were rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), with higher scores indicating better self-care and well-being.

The final instrument was named the Multidimensional Self-Care Scale for Older Adults (MSCS-OA) to reflect its person-centred and multidimensional conceptualization of self-care in later life.

Statistical Analysis: Data were screened prior to analysis and descriptive statistics were calculated for all items. Given the ordinal response format, analyses were based on polychoric correlations (Olsson, 1979; Flora and Curran, 2004).

To reduce overfitting, the sample was randomly divided into two independent subsamples. Exploratory factor analysis (EFA; $n=202$) was conducted on the first subsample and confirmatory factor analysis (CFA; $n=406$) on the second (Dragioti et al., 2011). EFA was performed using principal axis factoring with Varimax rotation, while CFA was estimated using the weighted least squares mean and variance adjusted (WLSMV) estimator. Model fit was evaluated using CFI, TLI, RMSEA, SRMR, and χ^2/df (Hu and Bentler, 1999; Schermelleh-Engel et al., 2003).

Internal consistency was assessed using Cronbach's α and McDonald's ω (McDonald, 1999; Nunnally and Bernstein, 1994). Discriminant validity was examined using the Fornell–Larcker criterion and the Heterotrait–Monotrait (HTMT) ratio (Henseler et al., 2015). Temporal stability was assessed using test–retest correlations over a three-month interval.

All analyses were conducted in R version 4.4 using the psych, lavaan, and semTools packages.

Results

Participant characteristics: The study included 608 community-dwelling older adults (63.5% women) with a mean age of 77.83 years ($SD = 8.22$; range 65–99). Most participants were married (58.4%), had children (92.8%), and had completed primary education (45.6%). Approximately half resided in small or medium-sized cities (51.1%), while 18.7% lived in rural areas. The most common living arrangement was cohabitation with a spouse (51.7%), followed by living alone (30.7%). Detailed sociodemographic characteristics are presented in Table 1.

Table 1. Sociodemographic characteristics of the sample (n = 608)

Characteristic	n	%
Gender		
Female	386	63.5
Male	222	36.5
Marital status		
Married	355	58.4
Widowed	199	32.7
Single	29	4.8
Divorced	25	4.1
Educational level		
Illiterate	71	11.7

Primary education	276	45.6
Lower secondary education	78	12.8
Upper secondary education	92	15.1
University/Technological Institute degree	91	15.0

Place of residence (n = 595)		
City <150,000 inhabitants	304	51.1
City ≥150,000 inhabitants	180	30.3
Village/small town	111	18.7
Parental status		
Has children	564	92.8

No children	44	7.2
Living arrangements (n = 603)		
Living with spouse	312	51.7
Living alone	185	30.7
Living with children	54	9.0
Living with spouse and children	34	5.6
Living with a friend	7	1.2
Living with a sister	6	1.0
Living with a brother	5	0.8

Preliminary item analysis: Across the 60 items, skewness ranged from -2.36 to 2.29 , and excess kurtosis ranged from -1.50 to 5.93 . Overall, polychoric correlations were low to modest (mean ≈ 0.07 , median ≈ 0.09), which is expected in heterogeneous, multidimensional item pools designed to capture distinct facets of a broad construct. The middle 50% of correlations ranged approximately from -0.13 to 0.27 . A small number of strong positive item pairs (up to ~ 0.78 ; e.g., items 6–7, 33–34, 4–5, 45–48, 1–6) likely reflect overlapping facets within the same underlying domain. In contrast, the most negative associations (down to ~ -0.55 ; e.g.,

items 29–30, 25–28, 1–17) suggest opposing dimensions of self-care or the influence of reverse-worded or reverse-coded items.

Exploratory factor analysis: Preliminary diagnostics supported factorability of the EFA correlation matrix: the Kaiser–Meyer–Olkin (KMO) index = $.83$ (good adequacy) and Bartlett’s test of sphericity was significant, $\chi^2(1770) = 6550.35$, $p < .001$, indicating that inter-item correlations were sufficient for factor extraction. The number of factors was determined using parallel analysis and inspection of the scree plot, both of which supported a seven-factor solution (Fig. 1).

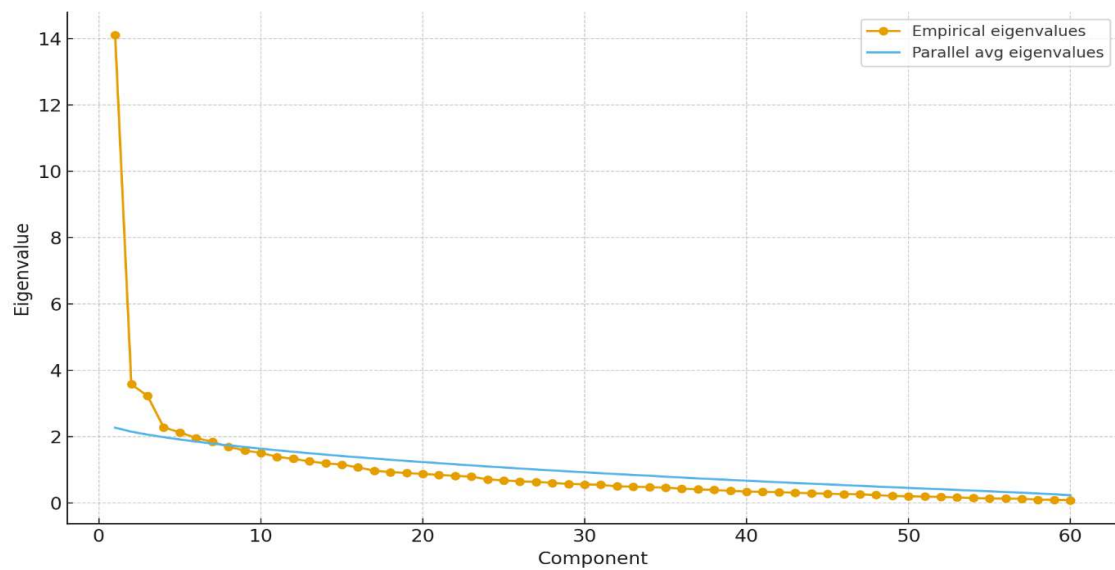


Figure 1. Scree plot with parallel analysis on the first subsample (n1=202)

To select the final indicators (items) for each factor, we applied standard loading-purity criteria: a primary standardized loading of at least .40 and a difference of at least .15 from

the second-largest absolute loading, to exclude items with problematic cross-loadings (Table 2).

Table 2. Items excluded during exploratory factor analysis (EFA) based on loading and cross-loading criteria (n₁ = 202)

Item	Primary Factor	Primary Loading	Secondary Loading	Difference	h ²
i24	F1	0.454	0.419	0.035	0.490
i21	F1	0.383	—	—	0.375
i60	F1	0.330	—	—	0.251
i11	Not retained	<0.30	—	—	0.106
i35	F2	0.574	0.428	0.146	0.634
i48	F2	0.516	0.428	0.088	0.600
i38	F2	0.480	0.426	0.054	0.477
i2	F2	0.469	0.420	0.049	0.532
i45	F2	0.466	0.380	0.086	0.569
i59	F2	0.385	0.368	0.017	0.428
i22	F2	0.378	0.372	0.006	0.453
i8	F2	0.367	—	—	0.298
i9	F2	0.344	0.325	0.019	0.282
i47	F2	0.334	0.309	0.025	0.307
i58	F2	0.327	—	—	0.223

i10	F2	0.324	—	—	0.176
i27	Not retained	<0.30	—	—	0.290
i49	F3	0.368	—	—	0.231
i37	Not retained	<0.30	—	—	0.186
i32	F5	0.439	0.430	0.009	0.523
i3	F5	0.416	0.397	0.019	0.406
i14	Not retained	<0.30	—	—	0.230
i46	Not retained	<0.30	—	—	0.135

Note. Items were excluded if they failed to meet the predefined retention criteria (primary loading $\geq .40$ and a minimum difference of .15 between primary and secondary loadings) or did not demonstrate a salient loading on any factor. h^2 = communality estimate.

Items that violated these thresholds were deemed ambiguous/cross-loading and were removed from the subscales. Under these criteria, the rotated loading matrix displayed clear items clustering across seven domains, with coherent content within each factor and minimal cross-loading (Table 3). Some items were reverse-coded before EFA (per Table 3

note). Cronbach's alpha and Omega ω coefficients were computed after item purification; the results indicated satisfactory internal consistency (Table 3). Varimax rotation was selected for factor interpretability; however, sensitivity analyses with oblique rotation yielded substantively similar solutions.

Table 3. Final factor structure and internal consistency of the MSCS-OA identified through exploratory factor analysis (EFA) (n1=202)

Factor	Items	Factor Label	Description	k	Cronbach's α	McDonald's ω
F1	i16, i30, i7, i17, i6, i12, i25, i1, i23, i29, i26, i28, i19	Functional Independence (FI)	Activities of daily living, mobility, safety, and household management	13	0.884	0.911
F2	i43, i18, i44, i13, i15, i20	Daily Well-Being and Positive Resources (DWB-PR)	Health habits, perceived safety, and social and emotional resources	6	0.728	0.814
F3	i53, i55, i54, i50, i57, i52, i36, i56, i51	Psychological Distress and Symptoms (PD-S)	Nervousness, intrusive thoughts, emotional distress, and cognitive concerns	9	0.836	0.874
F4	i34, i33, i31	Prevention and Healthcare Use (PHU)	Vaccination uptake and preventive healthcare practices	3	0.749	0.865

F5	i4, i5	Oral Hygiene (OH)	Tooth and denture care behaviours	2	0.889	0.948
F6	i42, i41	Spirituality and Religiosity (S-R)	Faith, spiritual comfort, and attitudes toward mortality	2	0.650	0.835
F7	i40, i39	Meaning and Life Purpose (MLP)	Sense of meaning, direction, and purpose in life	2	0.696	0.867

Note. k = number of items loading on each factor; α = Cronbach's alpha; ω = McDonald's omega. Only retained items are presented. Items '19', '26', '28', '30', '36', '37', '40', '42', '49', '50', '51', '52', '53', '54', '55', '56', '57', and '60' were reversed before EFA.

Confirmatory factor analysis: The confirmatory factor analysis (CFA) corroborated the structure suggested by the exploratory factor analysis (EFA). Overall fit was strong— $\chi^2(608) = 1796.37$, $p < .001$ (scaled $\chi^2 = 1595.28$, $df = 608$; scaled $\chi^2/df \approx 2.62$), with excellent incremental indices (CFI = 0.982, TLI = 0.980), acceptable absolute fit (RMSEA = 0.069, 90% CI: 0.066–0.073), and SRMR = 0.076. Factor loadings were generally high and in the expected directions across all factors, and the latent factor correlations aligned with the EFA pattern (substantial positive associations among conceptually related factors and negative associations where theorized). The confirmatory factor analysis reproduced the factor structure identified in the exploratory factor analysis (Fig. 2).

The final measurement model comprised seven correlated factors (Table 3): F1—Functional Independence (FI), capturing activities of daily functioning and autonomy; F2—daily well-being & positive resources (DWB-PR), reflecting day-to-day affective tone and positive psychosocial resources; F3—psychological distress & symptoms (PD-S), indexing internalizing symptoms and general distress; F4—prevention & healthcare use (PHU), representing preventive practices and engagement with health services; F5—oral hygiene (OH), capturing dental and oral

care behaviors; F6—spirituality/religiosity (S-R), reflecting spiritual beliefs and religious practices; and F7—meaning & life purpose (MLP), indexing perceived meaning and purpose in life. One item loading on the meaning & life purpose factor was not statistically significant ($p = .279$). Because latent factor polarity is arbitrary in CFA, factor orientation may invert during estimation; therefore, negative standardized loadings for inversely worded indicators (e.g., FI : i17, i19, i26, i28, i30 on FI) reflect item directionality, rather than model misspecification.

Discriminant validity: Discriminant validity was examined using the Fornell–Larcker criterion and the Heterotrait–Monotrait (HTMT) ratio. Average Variance Extracted (AVE) values were as follows: F1 = .611 ($\sqrt{AVE} = .781$), F2 = .355 ($\sqrt{AVE} = .596$), F3 = .479 ($\sqrt{AVE} = .692$), F4 = .648 ($\sqrt{AVE} = .805$), F5 = .839 ($\sqrt{AVE} = .916$), F6 = .535 ($\sqrt{AVE} = .731$), and F7 = .657 ($\sqrt{AVE} = .810$). Comparison of $\sqrt{AVE}$ values with the absolute inter-factor correlations ($|\phi|$) indicated that the Fornell–Larcker criterion was satisfied for all constructs except the F1–F2 pairing, where $\sqrt{AVE_F2}$ (.596) was lower than $|\phi_{\{F1, F2\}}|$ (.726) (Table 4). HTMT ratios, computed at the item level, are reported in Table 5. For the F1–F2 pairing, HTMT values remained below the conservative threshold of .85.

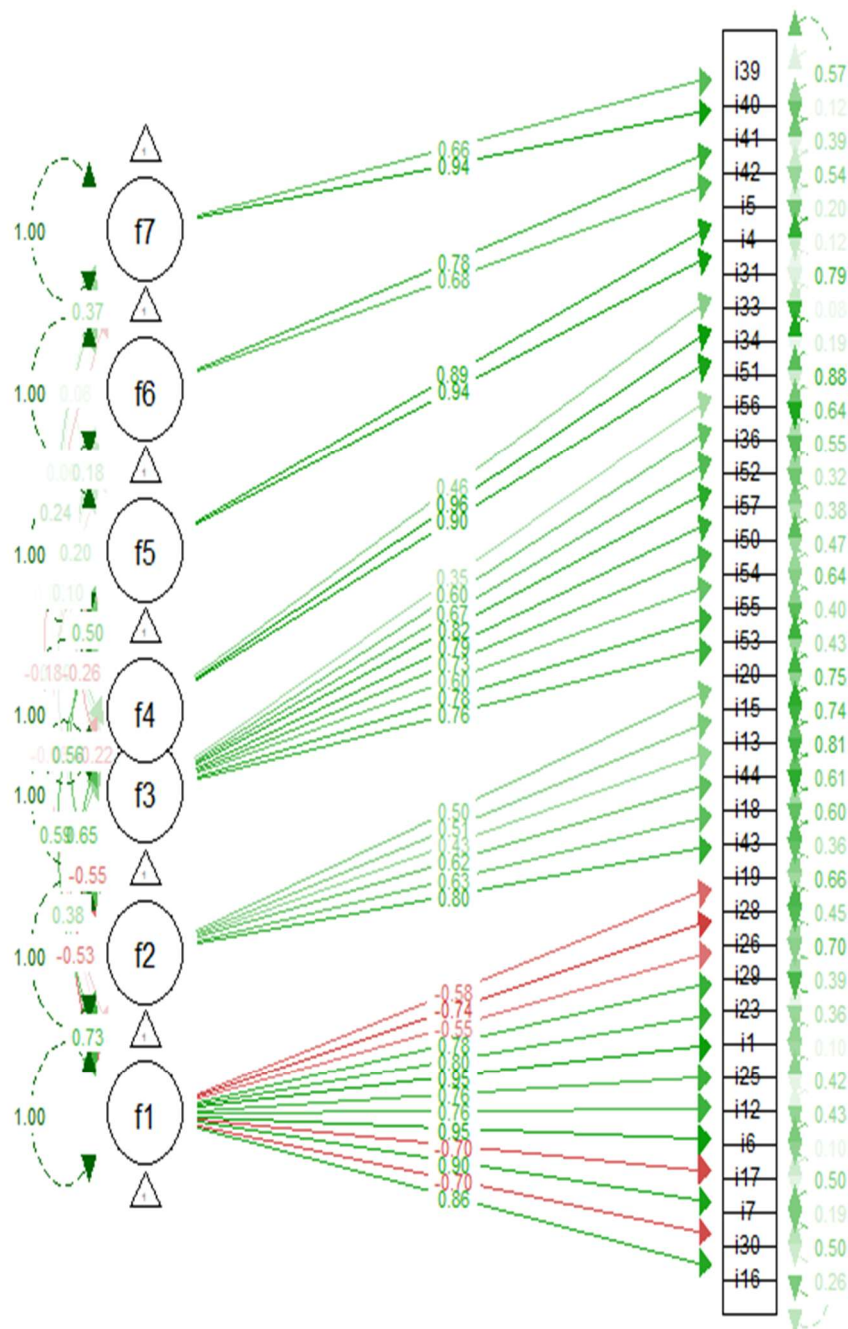


Figure 2. Path diagram of the confirmatory factor analysis in the second subsample (n2=406)

Table 4. Discriminant validity of the MSCS-OA based on the Fornell–Larcker criterion in the validation sample (n₂ = 406)

Factor	F1	F2	F3	F4	F5	F6	F7
F1. Functional Independence	0.782	0.726	0.526	0.379	0.587	0.082	0.181
F2. Daily Well-Being & Positive Resources	0.726	0.596	0.553	0.649	0.560	0.096	0.016
F3. Psychological Distress & Symptoms	0.526	0.553	0.692	0.219	0.255	0.096	0.240
F4. Prevention & Healthcare Use	0.379	0.649	0.219	0.805	0.495	0.200	0.059
F5. Oral Hygiene	0.587	0.560	0.255	0.495	0.916	0.177	0.059
F6. Spirituality & Religiosity	0.082	0.096	0.096	0.200	0.177	0.731	0.367
F7. Meaning & Life Purpose	0.181	0.016	0.240	0.059	0.059	0.367	0.811

Note. Diagonal values (bold) represent the square root of the average variance extracted ($\sqrt{\text{AVE}}$), whereas off-diagonal values represent absolute latent factor correlations ($|\phi|$). Discriminant validity is supported when the $\sqrt{\text{AVE}}$ of each construct exceeds its correlations with other constructs. The criterion was satisfied for all factors except the Functional Independence–Daily Well-Being & Positive Resources pairing.

Table 5. Heterotrait–Monotrait (HTMT) Ratio Matrix

Factor	F1	F2	F3	F4	F5	F6	F7
F1	—	0.704	0.450	0.295	0.549	0.146	0.161
F2	0.704	—	0.512	0.587	0.560	0.180	0.192
F3	0.450	0.512	—	0.188	0.234	0.185	0.220
F4	0.295	0.587	0.188	—	0.470	0.206	0.129
F5	0.549	0.560	0.234	0.470	—	0.165	0.088
F6	0.146	0.180	0.185	0.206	0.165	—	0.377
F7	0.161	0.192	0.220	0.129	0.088	0.377	—

Note. HTMT = Heterotrait–Monotrait ratio of correlations. Values below .85 indicate adequate discriminant validity under a conservative criterion, whereas values below .90 indicate acceptable discriminant validity under a more lenient criterion.

Descriptive Indices: For scoring, inversely worded items were reverse-scored as specified in Appendix 1, so that higher scores uniformly reflect higher self-care and well-being across subscales and the total score. PD–S subscale scores reflect symptom burden, whereas these items were reverse-scored only for total score computation to maintain consistent directionality across domains (Table 3). In the total sample

(n=608), the overall total averaged 122.11 (SD=11.56; median=122) or 3.30 (SD=0.31) on the mean-scaled metric, with subscale mean scores spanning roughly 2.26–4.17 and IQRs indicating moderate dispersion. Most distributions were near-symmetric to mildly skewed—left-skewed for F1-FI, F4-PHU, F5-OH, and F6-S-R, right-skewed for F3-PD–S and F7-MLP—with ranges suggesting few but plausible outliers, particularly at the upper end of F3-PD–S (Table 6).

**Table 6. Descriptive statistics of the MSCS-OA subscales and total score
N = 608)**

Subscale	Mean	SD	Median	IQR	Range
Functional Independence (FI)	3.50	0.37	3.54	0.31	2.00–4.77
Daily Well-Being & Positive Resources (DWB-PR)	3.86	0.66	3.83	0.83	1.00–5.00
Psychological Distress & Symptoms (PD-S)	2.26	0.79	2.17	1.11	1.00–5.00
Prevention & Healthcare Use (PHU)	4.17	0.94	4.33	1.33	1.00–5.00
Oral Hygiene (OH)	4.13	1.07	4.50	1.50	1.00–5.00
Spirituality & Religiosity (S-R)	3.47	1.19	3.50	2.00	1.00–5.00
Meaning & Life Purpose (MLP)	2.65	1.12	2.50	1.50	1.00–5.00
MSCS-OA Total Score	3.30	0.31	3.30	0.38	2.32–4.73

Note. Subscale scores are presented on a mean-item metric (range 1–5), with higher scores indicating greater self-care and well-being. Items comprising the Psychological Distress & Symptoms subscale were reverse-scored only when computing the total MSCS-OA score.

Test-retest Reliability: In the test–retest subsample ($n = 100$), internal consistency of the total scale at retest was acceptable (Cronbach's $\alpha = .70$). Test–retest analyses demonstrated high temporal stability for the total MSCS-OA score ($r = .86$, $p < .001$).

At the subscale level, temporal stability coefficients ranged from satisfactory to excellent: Functional Independence (F1), $r = .90$; Daily Well-Being & Positive Resources (F2), $r = .87$; Psychological Distress & Symptoms (F3), $r = .74$; Prevention & Healthcare Use (F4), $r = .84$; Oral Hygiene (F5), $r = .83$; Spirituality/Religiosity (F6), $r = .79$; and Meaning & Life Purpose (F7), $r = .84$.

Discussion

The present study developed and psychometrically validated the Multidimensional Self-Care Scale for Older Adults (MSCS-OA), a person-centred instrument designed to assess self-care among community-dwelling older adults. The findings support a seven-factor structure

comprising 37 items and reinforce contemporary views of self-care as a multidimensional process extending beyond functional ability to encompass psychological, preventive, behavioral, and existential resources. In line with person-centred models of aging, self-care emerged not merely as the capacity to perform daily activities but as a broader process through which older adults maintain autonomy, well-being, identity, and meaning in everyday life (Kitwood, 1997; Martela and Steger, 2016; McCormack and McCance, 2017).

The observed factor structure is consistent with contemporary conceptualizations of self-care as a dynamic, adaptive, and context-sensitive process rather than a fixed set of health-related behaviours (Lawless et al., 2021; González-González and Requena, 2023; Schulman-Green et al., 2016). A notable feature of the model is the distinction between Functional Independence and Daily Well-Being & Positive Resources. Although these dimensions were substantially correlated, evidence for discriminant validity

supported their retention as separate constructs. This distinction is conceptually important because functional independence reflects the practical capacity to maintain autonomy and participation in daily life, whereas daily well-being captures the subjective and experiential aspects of aging (Toledano-González et al., 2019). Consistent with previous research, individuals with comparable levels of functional ability may differ considerably in their psychological well-being and perceived quality of life (Ryff, 2014; Safaiyan et al., 2023). The present findings therefore support the assessment of both functional and experiential aspects of self-care within person-centred approaches to aging.

An important contribution of the MSCS-OA is the inclusion of Meaning & Life Purpose and Spirituality/Religiosity as distinct dimensions of self-care. Their emergence as separate factors reinforces the view that self-care in later life cannot be fully understood through functional performance or healthcare adherence alone. Person-centred frameworks emphasize that older adults actively maintain identity, dignity, and a sense of coherence despite age-related challenges and functional change (Kitwood, 1997; Martela and Steger, 2016; McCormack and McCance, 2017). From this perspective, existential resources may support motivation, resilience, and adaptation in everyday life. This interpretation is consistent with self-determination theory (Ryan and Deci, 2017) and with evidence linking meaning in life and spiritual resources to psychological well-being, resilience, and successful aging (Homan, 2016; Yousefi Afrashteh et al., 2024; Alimujiang et al., 2019).

The identification of Psychological Distress & Symptoms as a distinct factor further highlights the multidimensional nature of self-care. Psychological distress is not merely an outcome of illness or functional decline but may also influence engagement with self-management and health-promoting behaviours (Lorig and Holman, 2003; Bandura, 2004). The empirical separation of psychological distress from existential dimensions suggests that symptom burden and meaning-oriented resources represent related but distinct aspects of adaptation. This finding is consistent with research

demonstrating that meaning in life and spiritual well-being contribute uniquely to adjustment and quality of life beyond the effects of psychological symptoms alone (Bernard et al., 2017; Haugan, 2014).

Behavioral domains, including Prevention & Healthcare Use and Oral Hygiene, also emerged as distinct factors rather than being subsumed within functional independence. This finding supports the interpretation of preventive engagement and oral health maintenance as intentional self-care practices shaped by motivational, cognitive, and contextual influences beyond physical capacity alone (Pashmdarfard and Azad, 2020; Kim and Lee, 2025). Within person-centred care, these domains may help identify areas where additional support is needed in relation to health literacy, healthcare access, and engagement with preventive services.

Reliability indices ranged from satisfactory to strong across domains, including psychosocial and existential constructs that are often challenging to measure consistently (Streiner et al., 2015; Boateng et al., 2018). Test-retest analyses further demonstrated good temporal stability over a three-month interval, supporting the use of the MSCS-OA in both cross-sectional and longitudinal research. These findings suggest that the MSCS-OA provides a reliable framework for assessing self-care in older adulthood. Although one item within the Meaning & Life Purpose domain showed weaker performance in the confirmatory model, the overall factor remained theoretically coherent and psychometrically acceptable. Future refinement of this domain may further strengthen measurement precision.

The practical implications of the MSCS-OA are particularly relevant for person-centred care. Existing assessments of self-care in older adults frequently emphasize functional ability and activities of daily living, potentially overlooking psychological, preventive, and existential resources that shape everyday adaptation. By integrating these domains within a single framework, the MSCS-OA provides a more comprehensive profile of self-care strengths and vulnerabilities. Such information may support individualized care planning, facilitate shared decision-making, and improve identification

of older adults who may benefit from targeted psychosocial or health-promotion interventions.

Study limitations: Several limitations should be acknowledged. First, the cross-sectional design precludes conclusions regarding causal relationships among self-care dimensions and health outcomes. Second, the sample was restricted to community-dwelling older adults who were able to participate in face-to-face assessments; therefore, the findings may not generalize to institutionalized populations or individuals with severe cognitive impairment. Third, the MSCS-OA was developed and validated in a Greek-speaking population, and additional cross-cultural validation is needed before broader international application. Finally, although the identified factor structure demonstrated satisfactory psychometric properties, some domains were represented by a limited number of items and may benefit from further refinement in future studies.

Future research should evaluate the predictive validity and responsiveness of the MSCS-OA to intervention-related change and examine measurement invariance across demographic and cultural groups. Longitudinal studies are also warranted to investigate whether self-care profiles assessed by the MSCS-OA predict important outcomes such as functional decline, healthcare utilization, psychological well-being, and quality of life. Such evidence would further strengthen the utility of the instrument for both research and person-centred care planning in older adulthood.

Conclusions: Overall, this work introduces the MSCS-OA as a person-centred approach to assessing self-care in older adulthood as it is experienced in everyday life. The findings suggest that self-care is organized across interconnected domains extending beyond functional ability to include psychological, preventive, and meaning-related resources. In keeping with person-centred medicine, the MSCS-OA may support assessment and care planning that attends to older adults' experiences, priorities, and agency, rather than relying solely on function-focused approaches. The scale may also be useful for identifying areas requiring support, monitoring self-care over time, and evaluating

the effectiveness of interventions aimed at promoting healthy and meaningful aging.

Acknowledgements: The authors would like to thank all older adults who generously participated in this study, as well as the community centres, primary healthcare units, and senior associations that facilitated recruitment and data collection. We also acknowledge the contribution of trained interviewers and collaborating healthcare professionals for their support during the data collection process.

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