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Slovenian Translation and Validation of the European Health Literacy Survey Questionnaire (HLS-EU-Q47)

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ABSTRACT

The HLS-EU-Q47 serves as a self-reported instrument designed for the consistent evaluation of health literacy levels. This research sought to adapt the HLS-EU-Q47 into Slovenian and evaluate its reliability and validity within the Slovenian population. The questionnaire underwent forward translation into Slovenian, backward translation, and a preliminary pilot testing phase. The final Slovenian adaptation was distributed by mail to a random sample of 2500 adult citizens in the Republic of Slovenia. Reliability assessment involved calculating Cronbach's alpha coefficients for the single-factor, three-factor, four-factor, and twelve-factor structures, which correspond to overall health literacy, the three primary health domains, the four information processing skills, and their twelve combined subdomains, respectively. Validity was assessed through confirmatory factor analysis, univariate comparisons, and multivariable linear regression. Out of the mailed questionnaires, 517 were returned (yielding a 21% response rate). The single-factor structure yielded the highest Cronbach's alpha value (0.950), with progressively lower values for the three-factor, four-factor, and twelve-factor structures. Confirmatory factor analysis indicated that the twelve-factor structure achieved the best fit indices (CFI 0.812; RMSEA 0.067, CI 0.065 to 0.070), outperforming the three-factor, four-factor, and single-factor models. In the multivariable regression analysis, only the relationship between self-rated health status and the overall health literacy score reached statistical significance ($p < 0.001$). The Slovenian adaptation of the HLS-EU-Q47 demonstrates strong reliability as a measure of health literacy. Although all structural models exhibited acceptable fit, none met every validity standard completely. Participants more clearly distinguished among the three core health domains (healthcare, disease prevention, and health promotion) than among the four information processing skills (accessing, understanding, appraising, and applying).

Keywords: Health literacy, Questionnaire, Reliability, Translation, Validity

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Introduction

The European Health Literacy Project Consortium (HLS-EU Consortium) defines health literacy as encompassing individuals' knowledge, motivation, and abilities to locate, comprehend, evaluate, and utilise health-related information when forming judgements and making choices in daily life related to healthcare, disease prevention, and health promotion [1]. Health literacy directly influences both population and personal health outcomes, making limited health literacy a significant risk factor for poorer healthcare results [2, 3].

Evaluating health literacy helps pinpoint groups at higher risk of inadequate levels, allowing targeted actions to enhance their healthcare access, promote greater involvement in self-health management, and advance health equality [4]. Beyond conceptualising health literacy, its comprehensive assessment is essential, with comparable results across populations. An optimal assessment approach should differentiate functional, interactive, and critical dimensions of health literacy [5]. Functional health literacy involves basic literacy abilities applied effectively in routine scenarios. Interactive health literacy entails advanced skills for actively engaging with health-related content and adapting information to evolving situations. Critical health literacy involves higher-

level abilities to analyse information critically and exert greater influence over health-related circumstances and events.

To facilitate national policy development and international comparisons, health literacy measurement requires standardisation across countries [6].

Numerous tools exist for assessing health literacy, among which the European Health Literacy Questionnaire (HLS-EU-Q47) is one of the most extensively applied [7]. Developed by the HLS-EU Consortium, the HLS-EU-Q47 is a subjective instrument intended to gather comparable data on health literacy throughout Europe, offering national insights and supporting cross-country analyses grounded in the definition and framework proposed by Sorensen *et al*. [1, 7]. This framework separates health literacy into three key domains—healthcare, disease prevention, and health promotion—while incorporating four core competencies in processing health information: accessing, understanding, appraising, and applying. These competencies demand particular cognitive and literacy capacities, including searching for and obtaining health information (accessing); grasping its meaning (understanding); judging its quality and relevance (appraising); and employing it to inform health-related decisions (applying) [1]. Within healthcare, these apply to handling medical details and decisions; in disease prevention, to managing risk factor information; and in health promotion, to addressing determinants in social and physical environments. As a self-administered tool, the HLS-EU-Q47 requires cultural and linguistic adaptation for each country to maintain relevance and accuracy [8]. Consequently, validated national versions of the HLS-EU-Q47 are critically needed [7].

Aim

The study aimed to produce a Slovenian translation of the HLS-EU-Q47 and assess its reliability and validity in the Slovenian context.

Ethics approval

Approval was granted by the National Medical Ethics Committee of the Republic of Slovenia (registry number 0120-223/2019/4). The accompanying letter informed participants that responses would remain anonymous and be processed in compliance with the General Data Protection Regulation (EU) 2016/679 of April 27, 2016. It further explained that submitting a completed questionnaire constituted informed consent and voluntary involvement.

Materials and Methods

HLS-EU-Q47 questionnaire

The HLS-EU-Q47 evaluates individuals' perceived competence in handling health information. Its underlying framework differentiates three principal domains—healthcare, disease prevention, and health promotion—and four processing competencies: accessing, understanding, appraising, and applying [1, 7]. These elements form the basis for various structural models, including one-factor, three-factor, four-factor, and twelve-factor configurations, as described by Sørensen *et al*. The instrument comprises 47 items rated on a four-point self-evaluation scale (very easy, easy, difficult, very difficult).

Translation and development of the slovenian adaptation of the HLS-EU-Q47

The original HLS-EU-Q47 was supplied by the research team of the European Health Literacy Project Consortium, based at Maastricht University in the Netherlands and coordinated by Kristiana Sørensen. Written authorisation for the translation and validation process was granted by Dr Jürgen Pelikan, a member of the original questionnaire development team. The translation procedure adopted in this study closely mirrored approaches outlined in earlier publications [7]. Initially, two independent translators produced separate Slovenian versions from the English source. Discrepancies between these versions were examined and reconciled by the research team. Subsequently, a third independent translator performed a back-translation into English. This back-translated version was then compared against the original to verify conceptual equivalence. Particular emphasis was placed during review on linguistic nuances specific to Slovenian and on cultural appropriateness, with adaptations made accordingly. The content alignment between the original and the Slovenian version was satisfactory, eliminating the need for further revisions. Additional items gathering sociodemographic details—covering gender, age,

educational attainment, statistical region of residence, household income, and self-rated overall health—were appended to the questionnaire.

Pilot testing

A convenience sample of 10 individuals received the complete mailing package, consisting of an introductory letter and the Slovenian HLS-EU-Q47 supplemented with sociodemographic items. Feedback was solicited regarding the comprehensibility of the materials, ease of completion, formatting of the questionnaire, and any other observations.

Participant recruitment and data gathering

Eligibility was restricted to adults aged 18 years or older residing in the Republic of Slovenia. Sample size determination followed Nunnally's guideline of at least 10 respondents per item [9], yielding a minimum target of 470 completed questionnaires. Anticipating a response rate of 20–30%, randomly selected mailing addresses for 2500 individuals were acquired from the Statistical Office of the Republic of Slovenia. Each received a printed questionnaire package, including a prepaid return envelope. No follow-up reminders were issued, and participation was voluntary with questionnaires returned anonymously. Data collection occurred between June and September 2020.

Statistical procedures

Analyses were conducted using IBM SPSS Statistics version 27 and IBM SPSS AMOS version 27. Responses were treated as missing if left blank, completed incorrectly, or if the 'do not know' response was selected.

Descriptive statistics

Sociodemographic characteristics were summarised using appropriate measures, with medians presented alongside interquartile ranges (IQR).

Reliability assessment

Internal consistency was evaluated through Cronbach's alpha coefficients, interpreted as an indicator of scale reliability. Values of 0.70 or higher were deemed acceptable [10]. Reliability was examined separately for the one-factor, three-factor, four-factor, and twelve-factor structures. Further checks identified whether removal of any individual item would enhance consistency within its respective factor.

Validity assessment

Validity was investigated via confirmatory factor analysis (CFA), univariate associations, and multiple linear regression (MLR). Given the pre-established theoretical structure of the instrument, exploratory factor analysis was deemed inappropriate and thus omitted [11, 12]. CFA, implemented in AMOS, evaluated the relative fit of the four hypothesised models (one-, three-, four-, and twelve-factor). Survey data were imported from SPSS into AMOS, with missing values imputed using mean substitution. Model fit was assessed with the chi-square goodness-of-fit statistic (χ^2 test), root mean square error of approximation (RMSEA), comparative fit index (CFI), and associated p-values. Acceptable thresholds included χ^2/df ratios below 3.0 and RMSEA values $\leq$0.060 [12]; RMSEA $\leq$0.080 was considered tolerable for smaller samples when supported by other indices. CFI values exceeding 0.95 indicated good fit, 0.90–0.95 acceptable fit, and below 0.90 poor fit [11]. No model modifications were applied based on modification indices, as no robust theoretical justification existed for such changes [3, 13]. Statistical significance was set at $p < 0.05$.

Univariate analyses examined pairwise associations. MLR assessed relationships between multiple predictors and a single outcome variable. The Health Literacy Index served as the dependent variable and was computed according to HLS-EU Consortium recommendations [8] using the formula: Index = (mean − 1) × (50/3), where the mean represents the individual's average across all items, 1 is the lowest possible mean, 3 is the mean range, and 50 is the chosen index maximum. Resulting scores allowed categorisation into four levels: inadequate (0–25), problematic (>25–33), sufficient (>33–42), and excellent (>42–50). Predictor variables comprised gender, age, education, region, monthly income, and self-rated health. Multicategorical variables were recoded as dummy variables. The simultaneous (Enter) entry method was employed, and multicollinearity was checked via variance inflation factors.

Results and Discussion

Pilot testing

Feedback from the pilot phase revealed no requirement for additional modifications to the questionnaire content.

Participant profile and sociodemographic features

The study obtained 517 usable questionnaires (response rate 21%; 517/2500), exceeding the predetermined sample requirement. Respondents had a median age of 55 years, with females comprising 58.2% of the sample **(Table 1)**. The largest proportion held secondary-level education (47.0%) and reported monthly income below 700€ (27.5%). Self-rated health was most commonly described as good (33.5%), followed by very good (25.7%), acceptable (23.2%), excellent (12.0%), and poor (4.3%).

Table 1. Participants' sociodemographic profile

Characteristic	Distribution (n = 517; 100%)
Age (years), median (IQR)	55 (37–66)
Missing data	13 (2.5%)
Sex	
Female	301 (58.2%)
Male	215 (41.6%)
Unreported	1 (0.2%)
Educational attainment	
Primary education or below	48 (9.3%)
Secondary education	243 (47.0%)
Diploma	98 (19.0%)
Bachelor's degree	121 (23.4%)
Not reported	7 (1.4%)
Region of residence	
Pomurska	23 (4.4%)
Podravska	78 (15.1%)
Koroška	21 (4.1%)
Savinjska	67 (13.0%)
Zasavska	15 (2.9%)
Posavska	20 (3.9%)
Jugovzhodna	29 (5.6%)
Osrednjeslovenska	128 (24.8%)
Gorenjska	61 (11.8%)
Primorsko-Notranjska	20 (3.9%)
Goriška	23 (4.4%)
Obalno-Kraška	29 (5.6%)
Unreported	3 (0.6%)
Monthly household income (€)	
Less than 700	142 (27.5%)
701–900	86 (16.6%)
901–1100	81 (15.7%)
1101–1500	86 (16.6%)
Over 1500	56 (10.8%)
Not reported	66 (12.8%)
Self-assessed health	
Poor	22 (4.3%)

Acceptable	120 (23.2%)
Good	173 (33.5%)
Very good	133 (25.7%)
Excellent	62 (12.0%)
Missing	7 (1.4%)

IQR = interquartile range; "Unreported" refers to incomplete, incorrect, or "don't know" responses.

Reliability

The outcomes of the internal consistency evaluations for the single-factor, three-factor, four-factor, and twelve-factor structures are presented in **Table 2**. Apart from two instances, all structures demonstrated acceptable reliability, with Cronbach's alpha coefficients exceeding 0.700. The single-factor model achieved the highest alpha value, with decreasing values observed for the three-factor, four-factor, and twelve-factor models, respectively.

Within the twelve-factor structure, two subdomains exhibited notably lower alpha coefficients; these involved items 21 and 29. The subdomains affected by item 21 were "Disease prevention–Understanding information," comprising items 21 (...understand health warnings about behaviours such as smoking, low physical activity, and excessive alcohol consumption?), 22 (...understand why vaccinations are needed?), and 23 (...understand why health screenings are necessary?). Item 21 focused on comprehending warnings related to unhealthy behaviours, whereas the remaining items addressed comprehension of specific preventive actions (vaccinations and screenings).

The subdomains influenced by item 29 were "Disease prevention–Applying information," which included items 29 (...decide whether to get a flu vaccination?), 30 (...decide how to protect yourself from illness based on recommendations from family and friends?), and 31 (...decide how to protect yourself from illness based on information from the media?). Here, item 29 centred on decision-making regarding flu vaccination, while the other items concerned broader decisions about illness prevention.

Excluding items 21 and 29 improved the overall reliability of the twelve-factor model (raising all alphas above 0.700). However, removing these same items from the single-factor, three-factor, and four-factor models led to a reduction in their internal consistency.

Table 2. Internal consistency of the Slovenian version of the European Health Literacy Survey Questionnaire

Model	Health-related index	Cronbach's alpha
Single-factor model	Health care + Disease prevention + Health promotion + Access + Understand + Appraise + Apply	0.956
Three-factor model	Health care	0.902
	Disease prevention	0.895
	Health promotion	0.904
Four-factor model	Access	0.886
	Understand	0.853
	Appraise	0.883
	Apply	0.815
Twelve-factor combinations	Health care + Access	0.772
	Health care + Understand	0.787
	Health care + Appraise	0.767
	Health care + Apply	0.754
	Disease prevention + Access	0.764
	Disease prevention + Understand	**0.678**
	Disease prevention + Appraise	0.794
	Disease prevention + Apply	**0.634**

	Health promotion + Access	0.825
	Health promotion + Understand	0.746
	Health promotion + Appraise	0.815
	Health promotion + Apply	0.820

Note: Cronbach's alpha indicates the internal reliability of the questionnaire; values below 0.70 are highlighted in bold.

Validity

Confirmatory factor analysis (CFA)

The confirmatory factor analysis indicated that the twelve-factor structure exhibited the strongest validity across the evaluated fit indices—chi-square, RMSEA, and CFI—while the single-factor structure performed the poorest **(Table 3)**. Further examination of standardised regression weights in the twelve-factor model highlighted a notably low factor loading (<0.50) for item 29. Given that excluding items 21 and 29 had previously improved internal consistency in the twelve-factor model, a revised CFA was conducted without these items. This adjusted model demonstrated superior fit compared to the original twelve-factor version (χ^2/df 3.242; CFI 0.829; RMSEA 0.066, CI 0.063 to 0.069; $p < 0.001$).

The three-factor model outperformed the four-factor model in terms of validity, implying that participants more readily distinguished among the three primary health domains (healthcare, disease prevention, and health promotion) than among the four information processing skills (accessing, understanding, appraising, and applying). Although all tested models achieved acceptable overall fit, none met the strict threshold criteria for every index.

Table 3. Confirmatory factor analysis results (standard model) for the Slovenian version of the European Health Literacy Survey Questionnaire

Model	Health-related index	Comparative Fit Index (CFI)	χ^2/df	RMSEA (95% CI)	p-value
Single-factor model	Health care + Disease prevention + Health promotion + Access + Understand + Appraise + Apply	0.632	5.311	0.091 (0.089–0.094)	< 0.001
Three-factor model	Health care	0.705	4.466	0.082 (0.080–0.084)	< 0.001
	Disease prevention				
	Health promotion				
Four-factor model	Access	0.635	5.292	0.091 (0.089–0.094)	< 0.001
	Understand				
	Appraise				
	Apply				
Twelve-factor model	Health care + Access + Understand + Appraise + Apply	0.812	3.348	0.067 (0.065–0.070)	< 0.001
	Disease prevention + Access + Understand + Appraise + Apply				
	Health promotion + Access + Understand + Appraise + Apply				

Abbreviations: χ^2 = chi-square; df = degrees of freedom; RMSEA = Root Mean Square Error of Approximation; CI = Confidence Interval.

Univariate analysis

Univariate analysis results are presented in **Table 4**, indicating that older individuals tended to have lower educational levels, reduced income, and poorer overall self-rated health. The health literacy index declined with increasing age but was higher among those reporting better general health, while no significant associations were found with other variables.

Table 4. Results of univariate analysis of the Slovenian version of the European Health Literacy Survey Questionnaire

Variable	Income	Statistical Region	Education	Age	Gender	Health Literacy Index
Gender					–	p = 0.551 (Mann–Whitney)
Age				–	p = 0.187 (Mann–Whitney)	p = 0.014 (Spearman, r = −0.110)
Education			–	**p < 0.001 (Kruskal–Wallis, df = 3)**	p = 0.190 (Chi-square, df = 3)	p = 0.342 (Kruskal–Wallis, df = 3)
Statistical Region		–	NA	p = 0.981 (Kruskal–Wallis, df = 11)	p = 0.894 (Chi-square, df = 11)	p = 0.184 (Kruskal–Wallis, df = 11)
Income	–	NA	**p < 0.001 (Chi-square, df = 12)**	p = 0.004 (Kruskal–Wallis, df = 4)	p = 0.036 (Chi-square, df = 4)	p = 0.222 (Kruskal–Wallis, df = 4)
General Self-Perceived Health Assessment	**p < 0.001 (Kruskal–Wallis, df = 4)**	p = 0.409 (Kruskal–Wallis, df = 11)	**p < 0.001 (Kruskal–Wallis, df = 3)**	**p < 0.001 (Spearman, r = −0.460)**	p = 0.772 (Mann–Whitney)	**p < 0.001 (Spearman, r = 0.281)**

Abbreviations: HL, health literacy; KW, Kruskal–Wallis test; MW, Mann–Whitney test; S, Spearman's correlation; r, Spearman's rho; df, degrees of freedom; χ^2, chi-square test; NA, not applicable. Values in **bold** indicate statistically significant correlations.

Multiple linear regression

Participants were categorized based on their health literacy index as 'inadequate' (45/517; 8.7 percent), 'problematic' (234/517; 45.3 percent), 'sufficient' (184/517; 35.6 percent), and 'excellent' (54/517; 10.4 percent). Examination of multicollinearity showed that all variance inflation factors were below 2 and tolerance values exceeded 0.2, indicating minimal multicollinearity among the predictors. Only age and general self-perceived health assessment shared a high proportion of a small eigenvalue, suggesting that the variance of their regression coefficients was somewhat interdependent. Health literacy index was positively associated with general self-perceived health assessment, such that a one-unit increase on a 1–5 scale corresponded to a 1.910-point rise in health literacy index ($p < 0.001$, **Table 5**). Although participants from nearly all regions outside Osrednjeslovenska had lower health literacy scores, these differences were largely not statistically significant. Other factors, including gender, age, educational level, and monthly income, showed no significant association with the health literacy index.

Table 5. Results of multiple linear regression of the Slovenian version of the European Health Literacy Survey Questionnaire

Sociodemographic characteristics	Unstandardized coefficients		Standardized coefficients	t value	*p* value
	B	Std. Error	Beta		
Constant	27.729	1.904		14.565	**< 0.001**
Female versus male	0.598	0.640	0.045	0.934	0.351
Age	0.005	0.019	0.015	0.277	0.782
Education					
Primary school or lower education versus Secondary school	1.359	1.123	0.062	1.210	0.227
Diploma versus Secondary school	− 1.327	0.889	− 0.079	− 1.493	0.136
Bachelor's degree versus Secondary school	− 0.230	0.939	− 0.015	− 0.244	0.807
Statistical region*					
Jugovzhodna versus Osrednjeslovenska	− 3.702	1.400	− 0.132	− 2.645	**0.008**

Income					
701–900€ versus less than 700€	− 0.743	0.910	− 0.045	− 0.817	0.414
901–1100€ versus less than 700€	0.588	0.960	0.035	0.612	0.541
1101–1500€ versus less than 700€	0.893	1.009	0.054	0.885	0.377
More than 1500€ versus less than 700€	− 0.863	1.263	− 0.044	− 0.683	0.495
General self-perceived health assessment	1.910	0.347	0.305	5.497	**< 0.001**
Model summary					
R Square	0.123				
Adjusted R Square	0.079				

*Statistical regions not significantly correlated with the health literacy index are not shown in the table
Factors significantly correlated are highlighted in bold

Summary of primary results

Among the 517 participants in this research, the Slovenian adaptation of the HLS-EU-Q47 demonstrated strong reliability as a tool for assessing health literacy among adults in Slovenia. In terms of validity, the 12-factor structure exhibited the best overall fit; however, no tested model completely fulfilled every validity standard. The superior performance of the 3-factor structure over the 4-factor one suggests that respondents more clearly distinguished the three primary domains of health (health care, disease prevention, and health promotion) than the four competencies involved in processing health information (accessing, understanding, appraising, and applying it).

Advantages and limitations

This represents, to our knowledge, the initial effort to translate and validate the HLS-EU-Q47 for use in Slovenia. Additionally, the thorough evaluation of both reliability and validity provides a valuable foundation for advancing standardized health literacy measurement tools across various nations. That said, since the HLS-EU-Q47 relies on self-reported perceptions, participants might either downplay or exaggerate their actual capabilities. To validate these results, it would be beneficial to employ a performance-oriented measure of health literacy. Potential overestimation of the health literacy score could occur if primarily those with higher self-perceived literacy returned completed surveys. Other drawbacks include the modest response rate and the greater representation of women compared to men, both of which may limit how broadly the findings apply. Moreover, gathering more details about participants could help uncover additional influences on health literacy or consequences of limited literacy, including specific health conditions, body mass index, alcohol use, smoking habits, healthcare utilization, adherence to medications, and related factors [14, 15].

Implications and directions for future studies

Reliability

Internal consistency testing revealed elevated Cronbach's alpha coefficients across all structures, confirming the Slovenian HLS-EU-Q47 as a dependable measure. Particular attention was given to the 12-factor structure, where only items 21 and 29 showed suboptimal reliability. Removing these led to acceptable alpha levels in every subdomain. Lower alpha might stem from fewer items per scale, weak inter-item correlations, or varied constructs [16]. Accordingly, differences likely arose from varying item counts across models—the single-factor version encompassing all 47 items, while others used subsets. Nonetheless, the improved reliability in the refined 12-factor model (excluding items 21 and 29) could reflect weaker ties of those items to the subdomain indices. Comparable investigations of the HLS-EU-Q47 have reported satisfactory reliability, with Cronbach's alpha at 0.900 or above, across diverse nations [17-21] and even specific subgroups, such as individuals with breast cancer [22] or type 2 diabetes [23].

Validity

Confirmatory factor analysis indicated the strongest data fit for the 12-factor structure. Drawing from internal consistency and post-exclusion CFA outcomes for the 12-factor model, we recommend excluding items 21 and 29 from the instrument. A parallel observation appeared in Huang *et al*.'s work [22], where breast cancer patients' responses improved model fit after removing item 29; the researchers attributed this to varying societal views on influenza vaccination, shaped more by policy than personal health literacy.

No structure in our analysis met every threshold for CFA indices. This could result from the questionnaire's predefined framework, rooted in health literacy definitions rather than emergent response patterns. Notably, the 3-factor structure outperformed the 4-factor one, indicating that separating the four processing competencies demands greater literacy sophistication than separating the three health domains. We posit that discerning nuances among terms like "access," "understand," "appraise," and "apply" requires advanced literacy, leading respondents to group items primarily by topic rather than skill difficulty. Similar challenges in verifying the HLS-EU-Q47's underlying structure, including risks of local item dependency, have been noted elsewhere [22, 23], possibly due to overly comparable item phrasing that obscures skill distinctions. Thus, Huang *et al*. proposed rephrasing items for better differentiation [22], while Finbraten *et al*. advocated for a unitary scale derived from the HLS-EU-Q47 [23].

Univariate results showed elevated rates of inadequate health literacy among older, lower-educated, and lower-income groups in Slovenia. Yet, multivariate analysis revealed no significant links between the health literacy score and demographic variables, hinting at potentially stronger roles for other influences. Both univariate and multivariate regression highlighted self-assessed health status as the most robust predictor. The broader HLS-EU comparison across Europe documented a social gradient in health literacy, linking lower levels to financial hardship, lower status, limited education, or advanced age via bivariate and regression analyses [14]. A Slovenian study similarly identified age (though not education) as a factor in medication literacy [24]. Collectively, these findings imply that while demographics contribute, additional elements warrant exploration for fuller insight. Given the self-perceptive nature of HLS-EU-Q47, capturing subjective competence, interpretations should account for this aspect.

Subsequent investigations should target persistent difficulties in establishing validity for translated HLS-EU-Q47 variants. Still, prior validations in other countries have succeeded [21, 25, 26], and our data showed improving fit with increasing factors, supporting the 12-factor framework as optimal. Excluding certain items—particularly 21 and 29—might enhance model alignment. We contend that the Slovenian HLS-EU-Q47 holds promise for evaluating health literacy, pinpointing vulnerable groups, guiding targeted improvements in specific literacy areas, and enabling cross-national comparisons.

Conclusion

The Slovenian adaptation of the HLS-EU-Q47 serves as a dependable measure of health literacy in Slovenia's adult population. Although no structure met every validity requirement, the 3-factor version surpassed the 4-factor in fit, implying that separating the four information-processing skills in HLS-EU-Q47 demands higher literacy proficiency than separating the three core health domains.

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