

FACTORIAL VALIDITY AND RELIABILITY OF THE GREEK VERSION OF SCHOOL LIFE QUESTIONNAIRE

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Abstract

Schools play a central role in the educational and psychosocial development of students. School experiences - especially during the early years of schooling - can have a significant impact not only on students' daily lives and general well-being, but also on their later academic, social and professional lives. In this context, students' evaluations of their school life are related, but not necessarily identical, to various socio-emotional and enduring purposes of schooling and they have a significant impact on school learning, engagement in learning, and attendance. In the Greek literature, empirical studies on the students' evaluations of the quality of their school life are rather scarce, partly due to the limited number of measures suitable for capturing the multidimensional and complex nature of students' school life quality. To this end, the purpose of the present study was to test the factorial validity and reliability of the School Life Questionnaire-Greek version (SLQ-GR). The sample consisted of 258 students in the fifth and sixth grades of primary school. Students were asked to indicate their level of agreement for each of the 40 questions of the SLQ-GR based on a 4-point Likert scale (from 1=disagree to 4=agree). Results of exploratory and confirmatory analyses revealed that 35 (out of 40 items of the original scale) were organized into seven factors, similar to the structure of the original scale, reflecting two general domains (general satisfaction and negative affect) and five subdomains (teacher-student relations, social integration, opportunities, achievement and adventure) of students' evaluations of quality of school life. Cronbach's alpha for the ~~SLQ-GR~~ subscales ranged from 0.63 to 0.84, while the Cronbach's alpha for the total scale was 0.92, indicating satisfactory reliability for the SLQ-GR. Overall, the results of our study provided initial support for the factorial validity and reliability of the SLQ-GR.

Keywords: *School quality of life, primary education, scale adaptation.*

1. Introduction

Students spend a significant part of their lives at school. Early years of schooling have a strong impact not only on students' daily lives and general well-being, but also on their later academic, social and professional lives. As stated by Epstein and McPartland (1976), the question "Do you like your school?" is such a common question that, although it is discussed daily among children and adults, it has not gained attention and systematic study by social scientists. Based on the work of European Commission (2021, p. 8), *Quality of school life* is defined as "a multidimensional construct reflecting the attitudinal or emotional climate at school in terms of students' perceptions of well-being, determined by school-related factors and their experiences gained through their involvement in school life. Research has long suggested that it plays a vital role in improving students' motivation and effort, engagement with learning and academic achievement".

Students' perceptions of school life quality are shaped by social support, school environment, and personal factors. Studies highlight that support from teachers, peers, and family significantly impacts school satisfaction, though this support tends to decline with age, leading to lower satisfaction (Vidić, 2024). A supportive and safe school environment enhances students' sense of belonging, which is crucial for positive perceptions (Aliyev, & Tunc, 2015). Additionally, students' perceptions can be complex, reflecting both positive and negative aspects of their experiences. Overall, relative research emphasizes the need for schools to foster supportive environments that promote positive student experiences.

To support students' holistic development and help them thrive during their school years, it is crucial to have an accurate understanding of the factors that influence how young students approach and experience schooling. To this end, reliable measures that can capture students' perspectives and feelings about various aspects of their school life are essential. In the Greek literature, empirical studies on the

quality of students' school life are relatively scarce, partly due to the limited availability of tools that can adequately capture the multidimensional and complex nature of students' school experiences.

2. Aim of the present study

To address this gap, our study aimed to translate the School Life Questionnaire (SLQ; Ainley and Bourke, 1992) -one of the most well-known multidimensional tools for evaluating the quality of students' school life - into Greek (SLQ-GR) and test its factorial validity and reliability. We selected the SLQ for our study because it captures the multidimensional nature of school life quality, explores unique aspects of primary students' school life (e.g., social integration), is easy to use and has a relatively short completion time.

3. Method

3.1. Participants

A total of 258 primary school students participated in the study. Specifically, the sample included 106 (41.1%) students from 5th grade and 152 (58.9%) students from 6th grade. Regarding participants' gender, 133 students (51.6%) were boys, 105 students (40.7%) were girls, while 20 students did not provide information about their gender.

3.2. The school life questionnaire

The primary school version of SLQ was created in the early 1990s. It consists of 40 items that capture the multidimensional aspects of primary students' school life. The 40 items of the scale assess different aspects of students' school life and are organized into seven domains: two general domains related to students' overall school life and five specific domains.

- *General Satisfaction* (also called Positive Affect): It consists of six items that investigate students' general positive feelings about their school (e.g., My school is a place where I really like to go each day).
- *Negative Affect*: This subscale is consisted of five items and refers to students' general negative feelings about their school (e.g., My school is a place where I feel worried). The five specific domains assessed by SLQ are:
- *Achievement* (5 items), which reflects students' confidence in being successful in school (e.g., My school is a place where I am good at schoolwork.);
- *Opportunity* (6 items) explores students' beliefs about the relevance of schooling for their future lives (e.g., My school is a place where what I learn will be useful);
- *Teachers* (also called Teacher-Student Relation, 5 items) focuses on students' perceptions of the quality of interaction with their teacher (e.g., My school is a place where my teacher listens to what I say);
- *Social Integration* assesses students' experiences and gains from getting along with other people at their school (e.g., My school is a place where I get on well with other students in my class);
- *Adventure* (5 items) captures students' sense of self-motivation in learning and their perceptions of learning as an enjoyable process (e.g., My school is a place where I get excited about the work we do.)

Participants were asked to indicate their level of agreement for each of the 40 items of the SLQ-GR based on a four-point Likert scale ranged from 1 (*I disagree*) to 4 (*I agree*). The estimated time for completing the SLQ is approximately 15 minutes.

3.3. Procedure – Ethics

To the best of our knowledge, the SLQ (Ainley & Bourke, 1992) has not been used with a Greek student population before. Therefore, we initially sought formal permission from the Australian Council for Educational Research (ACER), which holds the rights to the SLQ, to translate it into Greek. ACER granted written permission for the translation. Following ACER's approval, we implemented a double-blind translation procedure. The Greek version of the SLQ (SLQ-GR) was subsequently tested through a pilot study with 40 primary school students. After reviewing the results of the pilot study, ACER approved the Greek translation of the SLQ.

With ACER's approval, we proceeded with the main study. Two members of the research team, after coordinating with principals from selected schools, distributed the SLQ-GR in paper-and-pencil format for teachers to administer and collect. Both the pilot and main studies received ethical approval from the Pedagogical Institute of the Ministry of Education of Greece.

4. Results

4.1. Factorial validity of the SLQ-GR

Following the procedure described by Ainley and Bourke (1992), two exploratory factor analyses (EFA) were conducted to examine the factor structure of the SLQ-GR. The first EFA included only items from the Positive and Negative affect domains of the SLQ-GR. The second EFA focused on items reflecting students' perceptions of specific domains of their school experience, including Opportunity, Social integration, Teacher-student relation, Adventure and Achievement.

For the first analysis, the Kaiser-Meyer-Olkin (KMO) test yielded a value of .87, exceeding the recommended threshold of .60 (Kaiser, 1974), while Bartlett's test of sphericity was statistically significant ($\chi^2(45) = 958.502$, $p < .001$). These results confirmed that the data were suitable for conducting an EFA. Subsequently, a principal components analysis with varimax rotation was performed.

The number of factors extracted was determined using the eigenvalue-greater-than-1 criterion (Kaiser, 1960), and a factor loading cut-off of $|\lambda_{.40}|$ was applied. The analysis supported a two-factor solution, explaining a cumulative variance of 58.27%. Items loading onto the first factor reflected students' general positive perceptions of their school experience, whereas items in the second factor represented negative perceptions or feelings about school life. Thus, the first factor, consisting of six items, corresponded to the Positive Affect (or General Satisfaction) domain, while the second factor, comprising four items, represented the Negative Affect domain. The detailed results of the EFA for these two general domains of the SLQ-GR are presented in Table 1.

Table 1. Exploratory factor analysis of SLQ-GR items of two general domains.

Items	Factor I	Factor II
	Positive affect	Negative affect
SLQ-GR 8.	.810	
SLQ-GR 33	.809	
SLQ-GR 11	.742	
SLQ-GR 21	.719	
SLQ-GR 1	.697	
SLQ-GR 17	.547	
SLQ-GR 14		.829
SLQ-GR 5		.736
SLQ-GR 28		.726
SLQ-GR 18		.616
Eigenvalue	4.445	1.383
Variance explained (%)	34.058	24.216

Next, a confirmatory factor analysis (CFA) using the maximum likelihood method was conducted with the same items included in the EFA. The statistical indexes of the tested model indicated a good model fit: $\chi^2/df = 1.30$, CFI = 0.97, AGFI = 0.93, RMSEA = 0.06, and SRMR = 0.045, aligning with recommended thresholds (Hu & Bentler, 1999; Kline, 2006). These results provided further support for the two-factor structure of the SLQ-GR, confirming the distinction between the Positive Affect and Negative Affect domains. Subsequently, a second EFA was conducted using the SLQ-GR items related to the specific domains of students' perceptions of school life quality. The Kaiser-Meyer-Olkin (KMO) test yielded a value of .88, exceeding the recommended threshold of .60 (Kaiser, 1974), and Bartlett's test of sphericity was statistically significant ($\chi^2(406) = 2531.615$, $p < .001$), confirming that the data were suitable for EFA. Given these, a principal components analysis with varimax rotation was performed. The number of factors extracted was determined using the eigenvalue-greater-than-1 criterion (Kaiser, 1960), and a factor loading cut-off of $|\lambda_{.40}|$ was applied.

The results of the principal components analysis initially supported a six-factor solution. However, the sixth factor contained only a single item (SLQ-GR 36), leading to its removal. The EFA was then repeated with the remaining items, revealing a five-factor solution. During this iteration, three items (SLQ-GR 7, SLQ-GR 24, and SLQ-GR 26) were found to load onto incorrect factors (i.e., they showed a stronger association with a factor different from the one they were originally intended to represent). These items were removed, and the analysis was conducted again. The final EFA results confirmed a five-factor structure, explaining 54.41% of the cumulative variance (Table 2).

Upon reviewing the item loadings, the five factors were identified as follows: the first factor (comprising six items) was identified as the Opportunity subscale. The second factor, also containing six items, represented the Social Integration subscale. The third factor, with five items, was associated with the Teacher-Student Relationship subscale. The fourth factor, consisting of five items, corresponded to the Adventure subscale, while the fifth factor, composed of three items, reflected the Achievement subscale.

Table 2. Exploratory factor analysis SLQ-GR items of specific domains.

Items	Factor I Opportunity	Factor II Social integration	Factor III Teacher-student R	Factor IV Adventure	Factor V Achievement
SLQ-GR12	.707				
SLQ-GR9.	.679				
SLQ-GR15	.678				
SLQ-GR31	.659				
SLQ-GR25	.658				
SLQ-GR39	.632				
SLQ-GR29		.701			
SLQ-GR30		.694			
SLQ-GR20		.675			
SLQ-GR6		.673			
SLQ-GR3	.435	.532			
SLQ-GR35		.531			
SLQ-GR22			.712		
SLQ-GR2			.688		
SLQ-GR38.			.687		
SLQ-GR19			.590		
SLQ-GR34			.586		
SLQ-GR27				.733	
SLQ-GR13				.669	
SLQ-GR32				.648	
SLQ-GR10				.618	
SLQ-GR23				.585	
SLQ-GR4					.765
SLQ-GR16					.692
SLQ-GR40					.519
Eigenvalue	7.099	2.232	1.689	1.335	1.248
Variance explained (%)	28.396	8.927	6.754	5.339	4.992

Although one fit index was below expectations (i.e., the Adjusted Goodness-of-Fit Index (AGFI) fell slightly below the recommended 0.90 threshold), the overall CFA results supported the five-factor solution for the specific domains of the SLQ-GR. The CFA yielded fit indices as follows: $\chi^2/df = 1.56$, CFI = 0.92, AGFI = 0.86, RMSEA = 0.05, and SRMR = 0.05, aligning well with the criteria suggested by Hu and Bentler (1999) and Kline (2006).

4.2. SLQ-GR reliability

The reliability of the SLQ-GR subscales ranged from 0.63 to 0.84, indicating acceptable to high internal consistency. Specifically, the Cronbach's α values for each subscale were as follows: General Satisfaction (6 items, $\alpha = 0.85$), Negative Affect (4 items, $\alpha = 0.75$), Opportunity (6 items, $\alpha = 0.81$), Social Integration (6 items, $\alpha = 0.78$), Teacher-Student Relation (5 items, $\alpha = 0.81$), Adventure (5 items, $\alpha = 0.72$) and Achievement (3 items, $\alpha = 0.63$). The overall reliability of the SLQ-GR, based on all 35 items, was $\alpha = 0.92$, demonstrating strong internal consistency.

5. Discussion

The aim of this study was to examine the factorial validity and reliability of the SLQ-GR. Based on the results of exploratory factor analysis and confirmatory factor analysis, the 35 items of the SLQ-GR were found to be structured into seven comprehensible factors. Similar to the original scale, two general factors emerged: General Satisfaction (or Positive Affect) and Negative Affect. Additionally, five specific factors emerged - Opportunity, Social Integration, Teacher-Student Relationship, Adventure, and Achievement - which also aligned with the domains assessed by the SLQ. Overall, the factor structure of the SLQ-GR closely mirrored that of the original scale in both the number and content of factors extracted and the domains represented. However, five items from the original scale were not retained in the SLQ-GR due to poor factor loadings:

SLQ-GR 37 ("My school is a place where I feel restless") failed to load onto the Negative Affect factor. This may be because younger students struggle to grasp the somatic and psychological aspects implied by the term "restless." Research suggests that young children often find it challenging to understand context-dependent vocabulary and abstract meanings (Barsalou, Dutriaux, & Scheepers, 2018). A simplified version, such as "My school is a place where I can't feel calm," might be more appropriate.

SLQ-GR 36 ("My school is a place where other students are very friendly") did not load onto the Social Integration factor. Unlike other items in this factor, which explicitly asked students how others make them feel or how well they are treated (e.g., "My school is a place where I know people think a lot of me"),

this item is worded more generally. It seems to prompt students to evaluate their peers' overall friendliness rather than their own experiences of social integration.

SLQ-GR 7 ("My school is a place where I know how to cope with the work") and SLQ-GR 26 ("My school is a place where I know I can keep up with the work") failed to load onto the Achievement factor. Unlike other Achievement items that directly assess students' perceived success, these items focus more indirectly on their ability to manage schoolwork. Variations in item wording within the same factor can influence how respondents interpret and answer them (Zeng, Jeon, & Wen, 2024).

SLQ-GR 24 ("My school is a place where I am popular with other students") loaded onto the Achievement factor instead of Social Integration. This suggests that students may perceive popularity not just as a social aspect of school life but as something to be earned or achieved. Additionally, in collectivistic cultures like Greece, academic success is often closely linked to popularity, whereas in individualistic cultures the relationship between popularity and academic achievement tends to be neutral or even negative (Zhang, Ren, Li, Liu, & Luo, 2019).

Regarding the reliability of the SLQ-GR, results showed that the reliability values ranged from 0.63 to 0.84 across the different subscales, which is satisfactory, with one exception. The Achievement subscale had lower reliability ($\alpha = 0.63$) and this is likely due to the small number of items (three), as a limited item count is known to reduce Cronbach's α (Iacobucci & Duhachek, 2003). The overall reliability of the SLQ-GR (35 items) was $\alpha = 0.92$, indicating strong internal consistency.

6. Conclusion and implications

Overall, the SLQ-GR demonstrated satisfactory factorial validity and reliability, closely aligning with the structure of the original scale. The findings of the study suggest that the SLQ-GR is an effective tool for assessing students' perceptions of school life quality, capturing both their general emotional experiences (Positive and Negative Affect) and their perceptions of specific school domains (Opportunity, Social Integration, Teacher-Student Relationship, Adventure, and Achievement).

These results have important implications for school psychology and educational practice. The SLQ-GR can help school psychologists, educators, and policymakers identify areas in need of intervention, such as low scores in Social Integration or Teacher-Student Relationship; in turn, these scores may indicate the necessity for peer support programs or teacher training initiatives to foster a more inclusive and supportive school environment. Additionally, the SLQ-GR provides a valuable means of monitoring school climate over time, allowing educators to track changes and evaluate the effectiveness of educational policies aimed at improving student well-being. Furthermore, the Negative Affect subscale may serve as an early indicator of school-related distress, guiding school psychologists in identifying students who may require psychosocial support or mental health interventions.

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