



Validity and reliability of the Turkish version of the 'Feeling Good, Living Life scale' in children aged 9–12 years

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ABSTRACT

This study aimed to assess the validity and reliability of the Turkish version of the Feeling Good, Living Life (FGLL) scale. A total of 177 children from two secondary schools in İstanbul participated. Data were collected using the Descriptive Characteristics Form, the FGLL, and the State-Trait Anxiety Inventory for Children (STAIC). The Turkish FGLL was evaluated for language and content validity, construct validity, and reliability. Confirmatory Factor Analysis (CFA) showed acceptable fit indices for both the Feeling Good (FG) ($\chi^2/df = 2.04$, GFI = 0.90, CFI = 0.90) and the Living Life (LL) parts ($\chi^2/df = 1.62$, GFI = 0.90, CFI = 0.95). Cronbach's alpha coefficients were 0.828 for the FG part and 0.851 for the LL part. A negative correlation was found between STAIC and FGLL scores. The Turkish FGLL is a valid and reliable tool for assessing spiritual well-being in children aged 9 to 12 years.

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Introduction

Driven by a search for meaning in life and inner peace, interest in the concept of spirituality has grown since the 1960s, as it became evident that materialism does not bring lasting happiness and that modern science does not offer answers to life's most fundamental questions, such as death, suffering, life-threatening diseases, and loss (Yılmaz 2011). Over the past two decades, spirituality and spiritual care have gained increasing attention in nursing, particularly with the emergence of the holistic care approach (Rieg, Mason, and Preston 2006).

Meleis' Concept Development theory defines spirituality as 'one's effort to understand and accept their relationship with self, others, place in the universe, and the meaning in life. It is something acquired as a result of knowledge and experiences gained throughout one's lifetime and constitutes the meaning and purpose in one's life' Arslan and Konuk Şener (2009). Other scholars describe spirituality as the 'driving force behind life', 'the breath of life', or 'animating force', representing an individual's connection to the self, others, nature, and a higher being or God (Çınar and Eti Aslan 2017; Parilakova and Babincak 2020).

Spirituality is a multidimensional construct that cannot be easily or rigidly defined, and the terms religion, faith and spirituality are often used interchangeably. While religion typically involves formal practices related to the worship of God or other supernatural

entities, spirituality can also manifest as an individual's internal search for meaning and connection, irrespective of religious beliefs (Çetinkaya, Altundağ, and Azak 2007; Çınar and Eti Aslan 2017). This broader conceptualisation allows for the expression of spirituality among individuals with or without religious affiliations (Çınar and Eti Aslan 2017). For example, a study from China found that parents whose children were in paediatric palliative care sought both religious and non-religious spiritual support to cope with grief after their child's death (Cai et al. 2020).

All human beings are considered to have a spiritual dimension, and children in particular are thought to possess a natural ability to have authentic spiritual experiences (Alvarenga et al. 2017). Spirituality plays an essential role in children's lives, fostering their sense of wonder, curiosity, and moral development. Children's spiritual development is typically influenced by their familial beliefs and the socio-cultural context in which they are raised (Alvarenga et al. 2017; Elkins and Cavendish 2004). While each child's spiritual development is unique, it also corresponds with their developmental stage, requiring age-appropriate methods for recognising and supporting spiritual expression.

Assessing spirituality in children is often challenging. Spiritual distress can manifest through behavioural indicators such as crying, nightmares, excessive questioning, and regressive behaviours (Fulton and Moore 1995), as well as anger, difficulty coping, sleep disturbances, defiance decreased hope, and emotional overwhelm (Elkins and Cavendish 2004). These signs often emerge at night or at bedtime, which can be especially difficult for children (Fulton and Moore 1995). While these signs can provide insight into a child's spiritual state, they are often subtle and require careful, validated tools for proper assessment (Rahmanian et al. 2018).

The 'Four-Domain Model of Spiritual Health and Well-Being' developed by John W. Fisher (2004) provides a framework for understanding spiritual health in terms of relationships with self (Personal Domain), others/family (Communal Domain), nature/environment (Environmental Domain), and a transcendent other/God (Transcendental Domain). This model served as the basis for two main instruments: the Spiritual Health and Life Orientation Measure (SHALOM) questionnaire for adults and adolescents, and the 'Feeling Good, Living Life' (FGLL) scale designed for use with children (Fisher 2004, 2011, 2016). The FGLL scale offers a developmentally appropriate, concise, and multidimensional approach to measuring spiritual well-being in children and has been applied in various cultural contexts. Its simplicity and clarity make it especially suitable for self-reporting by younger populations.

The State-Trait Anxiety Inventory for Children (STAIC) measures children's anxiety levels and has been associated with their emotional and spiritual well-being, making it relevant for examining the relationship between spirituality, anxiety, and overall mental health in children alongside the FGLL (Özusta 1995; Sielberger 1973).

Despite growing interest in children's spirituality, validated tools remain scarce in many contexts, including Turkey. Developed in Australia, the FGLL offers an inclusive view of spirituality beyond religious affiliation, encompassing relationships with self, others, nature, and a transcendent reality. Given Turkey's dominant religious beliefs, family-centred values, and collectivist culture – contrasting with Australia's multicultural and increasingly secular society – cultural adaptation is crucial. These differences may affect how children experience spirituality, necessitating validation of the FGLL in Turkish children. Nevertheless, the FGLL's relational approach supports its potential for cross-cultural use.

Since most spiritual measurement tools are designed for adults, the Turkish FGLL questionnaire was considered a promising tool for use in clinical practice with Turkish-speaking children. The aim of the present study was to demonstrate the validity and reliability of the Turkish version of the FGLL questionnaire for children aged 9–12. Through this validation, we aimed to provide a reliable instrument to support holistic paediatric care and spiritual assessment in Turkey.

The following hypotheses were tested in the study:

H1: The factor structure of the Turkish version of the FGLL will be similar to the factor structure of the original scale (Factorial validity).

H2: FGLL scale scores will be negatively correlated with STAIC scores (Criterion-related Validity).

H3: Cronbach's alpha reliability coefficients, lower-upper 27% group differences, and split-half reliability of the Turkish FGLL scale will be acceptable, and the scale scores will not change over time (Reliability).

Methods

Type of study

This study had a methodological design aimed at demonstrating the validity and reliability of the Turkish FGLL scale.

Study setting and duration

The study was conducted between November and December 2021 in two public secondary schools in the Kartal district of Istanbul Province, one of which was a Religious Vocational Secondary School.

Study universe

The study universe included fifth, sixth, and seventh grade students who were continuing their education during the study period.

Study sample

For methodological studies, the recommended sample size is typically 5–10 times the number of the items included in the scale (Erdoğan, Nahcivan, and Esin 2014). In this study, the FGLL scale included 16 items, and therefore, a minimum sample of 160 students was required. The final sample consisted of 177 students aged 9 to 12 years, who met the inclusion criteria and voluntarily agreed to participate in the study. Among the 177 students who completed the questionnaire, 102 participated in the test-retest conducted two weeks after the initial administration.

Sampling method

A non-random, convenience sampling method was used. Two schools were purposefully selected: one Religious Vocational Secondary School and one general public school, based on their accessibility and diverse socio-cultural backgrounds. Students were invited to participate based on parental consent and eligibility criteria. This purposive sampling aimed to capture varied spiritual well-being experiences of the children.

Study inclusion criteria

- Children whose parents provided written informed consent for participation in the study,
- Children without vision, hearing or cognitive impairment,
- Children without psychiatric disorders or who were not taking psychoactive medication,
- Children who could speak and understand Turkish, and read and write.

Data collection tools

The study data were collected using the Descriptive Characteristics Form, FGLL, and STAIC.

Descriptive Characteristics Form

The Descriptive Characteristics Form was developed by the study investigators, based on prior literature (Fazlollahi et al. 2022; Zarei et al. 2020). The form consists of 14 questions regarding socio-demographic characteristics (11 questions for the parents, 3 questions for the child), and had to be completed by the parents.

Feeling Good, Living Life (FGLL)

The FGLL was developed by John W. Fisher (Fisher 2004, 2016) in 2004 to assess the spiritual well-being of children aged 5 to 12 years. The tool has a Cronbach's alpha value of 0.71–0.84. The scale is designed to be easy to understand for children and is suitable for illiterate children when administered with the help of literate adults or peers (Fisher 2004, 2016).

The FGLL scale comprises two sections: *Feeling Good* and *Living Life*. Each section contains 16 items rated on a 5-point Likert scale. The items assess four subdomains of spiritual well-being: the individual's relationships with self (Items 5, 6, 9, 15), others/family (Items 4, 7, 8, 10), nature/environment (Items 2, 3, 13, 14) and transcendent other/God (Items 1, 11, 12, 16) (Fisher 2004, 2016). For each subdomain, the mean item score is calculated.

To enhance comprehensibility for children aged 5 to 12, responses are coded as follows. YES (5 points), yes (4 points), not sure/sometimes (3 points), no (2 points) and

NO (1 point). A spiritual harmony/dissonance score is derived by subtracting the total Feeling Good score from the total Living Life score (Fisher 2004, 2016).

State-Trait Anxiety Inventory for children (STAIC)

The STAIC, developed by Spielberger in 1973, was adapted into Turkish by Özusta in 1995. It evaluates state and trait anxiety in children aged 9 to 12 through two subscales, each containing 20 items (Özusta 1995).

The Trait Anxiety Inventory (TAI) measures general emotional patterns, using response options such as 'almost never', 'sometimes' and 'often' (Özusta 1995). The State Anxiety Inventory (SAI) assesses situational anxiety, with items rated from 1 to 3 based on current feelings.

Total scores for subscale range from 20 to 60, with higher scores indicating greater anxiety. The SAI, being sensitive to emotional states such as tension or excitement, should be administered prior to the TAI. Reported Cronbach's alpha values are 0.82 for the SAI and 0.81 for the TAI (Özusta 1995). In this study, the STAIC was used as a parallel measure to examine the criterion-related validity of the FGLL, given the conceptual link between emotional well-being and spiritual well-being in children.

Administration of data collection forms

Data collection was conducted by the study investigators. The Parental Consent Form, Descriptive Characteristics Form, and both scales were delivered to the children to be passed on to their parents, providing them with detailed information regarding the study's purpose, procedures, and use of data. Written informed consent was obtained from parents who agreed for their children to participate.

Eligible children whose parents provided consent completed the FGLL and STAIC. To ensure a comfortable and unbiased environment, teachers were not present during the administration of the scales. The FGLL items were read aloud by the study investigator in the classroom, and children were asked to respond individually. Instructions for the STAIC were then read, and participants were given sufficient time to complete the inventory. Both forms were completed within one class period (35–40 minutes).

Language adaptation

The original FGLL was independently translated into Turkish by two professionals fluent in both the source and target languages. To ensure linguistic accuracy, a back-translation was conducted by two nursing academicians proficient in English. The original structure of the scale was preserved, and no items were deleted or added. Minor wording adjustments were made to better fit the cultural context: for example, 'garden' was adapted to 'garden/nature' due to the prevalence of apartment living in Turkey, 'church' was replaced with 'place of worship', and 'God' was expressed as 'Tanrı (Allah)'. The back-translated version, including the minor cultural wording modifications, was subsequently reviewed and approved by John Fisher, the original developer of the FGLL.

Content validity

To assess the content validity of the Turkish version of the FGLL, the scale was sent to 10 expert evaluators who rated each item for comprehensibility and relevance on a 4-point scale (1 = Not Relevant; 2 = Needs Major Revision; 3 = Needs Minor Revision; 4 = Relevant). The average item ratings ranged from 3.75 ± 0.50 to 4.00 ± 0.00 (min: 2, max: 4). Kendall's W test was used to assess inter-rater agreement, yielding a value of 0.55 ($\chi^2 = 15.745$), indicating acceptable consensus. No significant divergence was observed among the experts ($p > 0.05$). To further assess the clarity of the items, online surveys were administered to 16 children and their parents, who were asked to respond to the scale items. The results indicated that the items were clear and easily understood, and no modifications were deemed necessary.

Statistical analysis

Data were analysed using SPSS version 19 (IBM Corp., Armonk, NY) and LISREL software. Descriptive statistics included numbers, percentages, minimum and maximum values, means, and standard deviations, Confirmatory factor analysis (CFA), Cronbach's alpha, upper/lower 27% analysis, split-half reliability, parallel forms reliability, and test-retest methods were employed to assess the scale's psychometric properties. A p -value of less than 0.05 was considered statistically significant.

Results

Descriptive Characteristics of the sample

Among the parents, 66.1% were mothers and the mean age was 39.27 ± 5.13 years. Of them, 33.9% were high school graduates, 98.3% were married, 46.9% had two children, and 54.2% were not employed. Most parents (74.6%) reported having an income equal to their expenses, and 70.1% indicated that the household size was 4 or more. Regarding religious beliefs, 68.4% stated they were religious and regularly practiced their beliefs. Among the children, 94.4% were girls, 54.8% were in 7th grade, and the mean age was 11.38 ± 0.84 years. When asked about attending a place of worship, 74% reported doing so occasionally (Table 1).

Construct validity-confirmatory factor analysis (CFA)

CFA is a widely used method to test the construct validity of measurement tools, particularly when they are adapted across different populations and cultures (Erdoğan, Nahcivan, and Esin 2014). In this study, CFA was conducted separately for the two parts of the FGLL scale. Feeling Good (FG) and Living Life (LL).

Feeling Good (FG) part

The CFA results for the FG part indicated that the model fit the data well. $\chi^2/df = 2.04$, $GFI = 0.90$, $CFI = 0.90$, $RMSEA = 0.008$, $RMR = 0.05$ (Table 2). The path diagram for the FG part is presented in Figure 1.

Table 1. Descriptive characteristics of the children and parents ($n = 177$).

Descriptive Characteristics	n	%
Parent		
Mother	117	66.1
Father	60	33.9
Age of Parent (years)		
35 or younger	56	31.6
36–40	52	29.4
41–45	45	25.4
46 or older	24	13.6
Education Level of Parent		
None	2	1.1
Primary school	32	18.1
Secondary school	39	22.0
High school	60	33.9
University degree or higher	44	24.9
Number of Children/Household		
1	19	10.7
2	83	46.9
3	52	29.4
4 or more	23	13.0
Employment of Parent		
Yes	81	45.8
No	96	54.2
Household Income		
Income less than expenses	24	13.6
Income equal to expenses	132	74.6
Income exceeds expenses	21	11.9
Household Size		
2–3	18	10.2
4–5	124	70.0
6 or higher	35	19.8
Religious Belief of Parent		
I do not want to disclose this information	15	8.5
I am religious and practice my beliefs regularly	121	68.4
I'm religious but I don't practice my beliefs regularly	41	23.1
Type of School		
Religious vocational secondary school	157	88.7
Public secondary school	20	11.3
School Grade		
Grade 5	40	22.6
Grade 6	40	22.6
Grade 7	97	54.8
Child's Sex		
Female	167	94.4
Male	10	5.6
Child's Age (years)		
9–10	30	17
11	43	24.2
12	104	58.8
Frequency of going to a place of worship		
Often	35	19.8
Sometimes	131	74.0
Never	11	6.2
Total	177	100

Table 2. CFA fit indices of the Turkish FGLL scale.

Part	Fit index	Value	Acceptable range	Perfect fit
'Feeling Good' Part	CFI	0.90	0.95 or higher	0.97 or higher
	GFI	0.90	0.85 or higher	0.90 or higher
	RMR	0.05	0.05 to 0.080	0.000 to < 0.050
	RMSEA	0.08	0.05 to 0.080	0.000 to < 0.050
	χ^2/df	2.04	Value should be nonsignificant and less than 3	
'Living Life' Part	CFI	0.95	0.95 or higher	0.97 or higher
	GFI	0.90	0.85 or higher	0.90 or higher
	RMR	0.056	0.05 to 0.080	0.000 to < 0.050
	RMSEA	0.06	0.05 to 0.080	0.000 to < 0.050
	χ^2/df	1.62	Value should be nonsignificant and less than 3	

CFI, Comparative Fit Index; GFI, Goodness of Fit Index; RMSEA, Root Mean Square Error of Approximation; RMR, Root mean square residual.

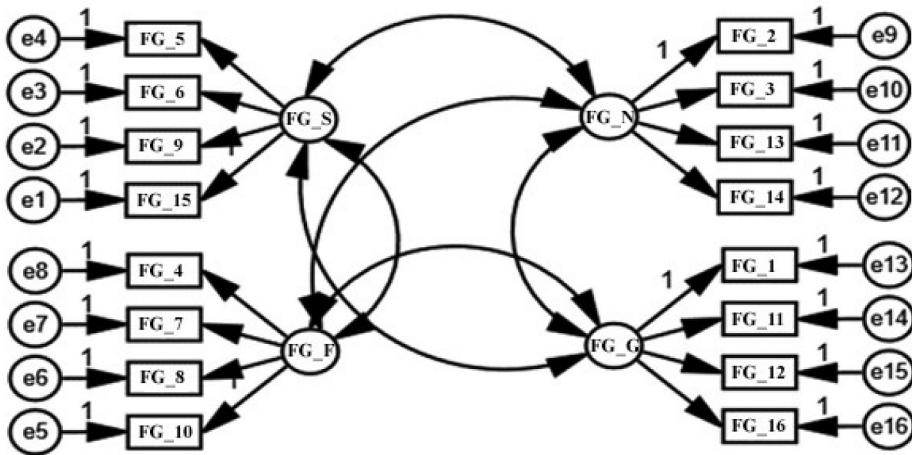


Figure 1. The path diagram for the CFA of the Feeling Good part. FG-Feeling Good; FG_S- Feeling Good Relationship with self; FG_F- Feeling Good Relationship with family; FG_N- Feeling Good Relationship with nature; FG_G- Feeling Good Relationship with God

Living Life (LL) part

Initial CFA results for the LL part also showed acceptable fit $\chi^2/df = 1.62$, $GFI = 0.90$, $CFI = 0.95$, $RMSEA = 0.06$, $RMR = 0.056$ (Table 2). However, examination of the model revealed the need for modification to improve fit. Based on the modification indices, a covariance was added between the residuals of Items 9 and 12. After this adjustment, the factor structure remained intact and the model fit improved while remaining within acceptable limits. Factor loadings after modification ranged between 0.70 and 0.76 (Table 3). Figure 2 presents the path diagram for the CFA of the LL part. Factor loadings for all FGLL items were high and statistically significant, with low standard errors (Table 3).

Reliability analyses

Reliability reflects a measurement tool’s ability to yield consistent results under repeated use.

Table 3. CFA factor loadings of the Turkish FGLL scale.

Items	Factors	Unstandardized β	Standardised β	Standard Error (SE)	t	p
FG_15	<← F1	1.000	0.564			
FG_9	<← F1	1.529	0.672	0.243	6.283	p < 0.001
FG_6	<← F1	1.314	0.701	0.204	6.428	p < 0.001
FG_5	<← F1	1.286	0.681	0.203	6.330	p < 0.001
FG_10	<← F2	1.000	0.680			
FG_8	<← F2	0.943	0.809	0.102	9.269	p < 0.001
FG_7	<← F2	0.910	0.837	0.096	9.500	p < 0.001
FG_4	<← F2	1.021	0.755	0.116	8.773	p < 0.001
FG_2	<← F3	1.000	0.377			
FG_3	<← F3	1.893	0.612	0.494	3.835	p < 0.001
FG_13	<← F3	2.034	0.705	0.520	3.911	p < 0.001
FG_14	<← F3	1.640	0.484	0.463	3.541	p < 0.001
FG_1	<← F4	1.000	0.792			
FG_11	<← F4	1.744	0.765	0.167	10.423	p < 0.001
FG_12	<← F4	0.763	0.479	0.123	6.178	p < 0.001
FG_16	<← F4	1.476	0.883	0.127	11.620	p < 0.001
LL_15	<← F1	1.000	0.818			
LL_9	<← F1	0.993	0.765	0.090	11.030	p < 0.001
LL_6	<← F1	0.845	0.703	0.085	9.921	p < 0.001
LL_5	<← F1	1.077	0.810	0.091	11.874	p < 0.001
LL_10	<← F2	1.000	0.605			
LL_8	<← F2	0.906	0.679	0.126	7.203	p < 0.001
LL_7	<← F2	0.919	0.814	0.113	8.119	p < 0.001
LL_4	<← F2	1.286	0.828	0.157	8.193	p < 0.001
LL_2	<← F3	1.000	0.266			
LL_3	<← F3	2.962	0.807	1.002	2.955	0.003
LL_13	<← F3	2.594	0.647	0.874	2.968	0.003
LL_14	<← F3	1.831	0.427	0.488	3.752	p < 0.001
LL_1	<← F4	1.000	0.851			
LL_11	<← F4	0.993	0.574	0.134	7.389	p < 0.001
LL_12	<← F4	0.991	0.701	0.108	9.162	p < 0.001
LL_16	<← F4	0.944	0.741	0.098	9.657	p < 0.001

FG- Feeling Good; LL-Living Life.

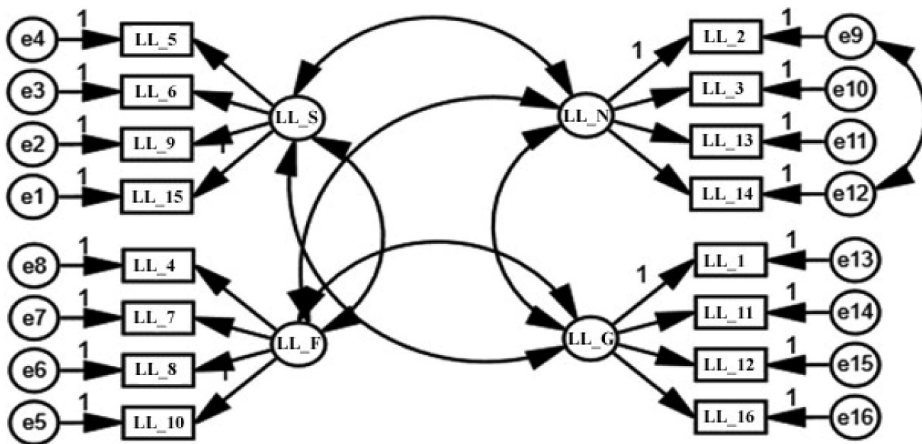


Figure 2. The path diagram for the CFA of the Living Life part. LL-Living Life; LL_S- Living Life Relationship with self; LL_F- Living Life Relationship with family; LL_N- Living Life Relationship with nature; LL_G- Living Life Relationship with God

Internal consistency

The Cronbach's alpha coefficients were 0.828 for the FG part and 0.851 for the LL part of the Turkish FGLL. The FG subdimensions had alpha values ranging from 0.736 to 0.843, while the LL subdimensions ranged from 0.695 to 0.855 (Table 4). These values exceed the recommended threshold of 0.60 for (Erdoğan, Nahcivan, and Esin 2014), indicating that the scale and its subscales are both internally consistent and highly reliable (Table 4).

Item-total correlation

Item-total score correlations ranged from 0.31 to 0.58 for the FG part and 0.33 to 0.70 for the LL part, suggesting acceptable item discrimination (Table 5).

Item discrimination

A significant difference was found between the upper 27% and lower 27% score groups ($p < 0.05$), demonstrating the scale's ability to discriminate between different levels of spiritual well-being measurements.

Split-half reliability

Using the split-half method, the Spearman-Brown correlation coefficients were $r = 0.878$ for the FG part and $r = 0.854$ for the LL part. The Guttman split-half coefficients were similarly high ($r = 0.877$ for FG, $r = 0.854$ for LL), indicating strong internal consistency and structural reliability across both parts of the scale.

Test-retest reliability

The test-retest reliability was examined using data from a subset of 102 children who completed the FGLL twice with a two-week interval. No statistically significant difference was found between the two administrations ($p > 0.05$), and strong positive correlations were observed (Table 6).

Parallel forms reliability

To evaluate parallel forms reliability, the FGLL scores were compared with those of the STAIC. The SAI showed negative correlations with both the FG part ($r = -0.569$; $p < 0.05$) and the LL part ($r = 0.616$; $p < 0.05$). Similarly, the TAI exhibited negative correlations with both the FG part ($r = -0.429$; $p < 0.05$) and the LL part ($r = -0.553$; $p < 0.05$). Thus, a negative moderate correlation was observed between FGLL and STAIC.

Table 4. Internal consistency coefficients for the Turkish FGLL scale and its subdimensions.

Domains	Number of items	Items	Score Range	Mean Score	'Feeling Good' Part (α)	'Living Life' Part (α)
Relationship with self	4	5,6,9,15	4–20	1–5	0.744	0.855
Relationship with family	4	4,7,8,10	4–20	1–5	0.843	0.797
Relationship with nature	4	2,3,13,14	4–20	1–5	0.736	0.695
Relationship with God	4	1,11,12,16	4–20	1–5	0.803	0.789
Total	16		16–80	1–5	0.828	0.851

α : Cronbach's alpha.

Table 5. Reliability coefficients and item-total correlations of the Turkish FGLL.

Part	Items	Item-total correlation	Cronbach's alpha if item deleted
'Feeling Good' Part	FG_1	.378	.823
	FG_2	.310	.827
	FG_3	.342	.826
	FG_4	.557	.812
	FG_5	.528	.812
	FG_6	.579	.809
	FG_7	.549	.815
	FG_8	.588	.812
	FG_9	.522	.813
	FG_10	.525	.813
	FG_11	.396	.821
	FG_12	.392	.821
	FG_13	.371	.823
	FG_14	.345	.828
	FG_15	.473	.816
	FG_6	.465	.818
	Cronbach's alpha		0.828
'Living Life' Part	LL_1	.400	.847
	LL_2	.346	.851
	LL_3	.468	.843
	LL_4	.611	.837
	LL_5	.637	.833
	LL_6	.657	.832
	LL_7	.624	.840
	LL_8	.481	.843
	LL_9	.626	.833
	LL_10	.580	.838
	LL_11	.367	.848
	LL_12	.409	.846
	LL_13	.498	.842
	LL_14	.334	.851
	LL_15	.703	.829
	LL_16	.364	.848
	Cronbach's alpha		0.851

FG- Feeling Good; LL-Living Life.

Discussion

The findings from the current study demonstrated that the Turkish version of the FGLL scale is both valid and reliable for use with Turkish children, fulfilling the study's objectives. All three hypotheses were accepted and supported by the data, with the factor structure being validated (H1), the expected negative correlations with the STAIC indicating criterion-related validity (H2), and the scale exhibiting strong reliability through various measures (H3).

Content validity plays a crucial role in ensuring the appropriateness of a measurement tool when adapting it to a new language and culture. As highlighted by Erdoğan, Nahcivan, and Esin (2014), expert evaluations are vital to assess the relevance and comprehensibility of scale items in the context of the target population. In this study, content validity was confirmed through expert ratings, with a mean score of 3.75, indicating strong agreement on the relevance of the items. The inter-rater agreement, assessed through Kendall's W test, revealed acceptable consensus among the experts, further supporting the validity of the adapted scale.

Table 6. Test-retest reliability results of the Turkish FGLL scale.

Measurements	Test		Retest		N	t ^a	p ^a	r ^b	p ^b
	Mean	SD	Mean	SD					
FG_1 – RFG_1	4.863	0.527	4.902	0.330	102	-0.815	0.417	0.434	0.000
FG_2 – RFG_2	4.020	0.867	3.873	0.972	102	1.774	0.079	0.591	0.000
FG_3 – RFG_3	3.843	1.060	3.784	1.087	102	0.617	0.539	0.598	0.000
FG_4 – RFG_4	4.696	0.806	4.686	0.783	102	0.199	0.843	0.804	0.000
FG_5 – RFG_5	4.598	0.836	4.480	0.793	102	1.364	0.175	0.429	0.000
FG_6 – RFG_6	4.588	0.722	4.539	0.829	102	0.713	0.478	0.606	0.000
FG_7 – RFG_7	4.755	0.636	4.755	0.667	102	0.000	1.000	0.674	0.000
FG_8 – RFG_8	4.677	0.692	4.598	0.748	102	1.157	0.250	0.550	0.000
FG_9 – RFG_9	4.098	1.148	4.029	1.112	102	0.740	0.461	0.657	0.000
FG_10 – RFG_10	4.510	0.962	4.549	0.908	102	-0.483	0.630	0.617	0.000
FG_11 – RFG_11	4.686	0.890	4.755	0.636	102	-0.786	0.434	0.370	0.000
FG_12 – RFG_12	4.765	0.548	4.696	0.642	102	1.094	0.276	0.442	0.000
FG_13 – RFG_13	4.255	0.875	4.147	0.927	102	1.329	0.187	0.588	0.000
FG_14 – RFG_14	4.039	1.160	3.922	1.050	102	1.283	0.202	0.653	0.000
FG_15 – RFG_15	4.569	0.815	4.520	0.829	102	0.685	0.495	0.614	0.000
FG_16 – RFG_16	4.745	0.670	5.118	4.030	102	-0.938	0.350	0.542	0.000
LL_1 – RLL_1	4.775	0.702	4.794	0.551	102	-0.323	0.747	0.544	0.000
LL_2 – RLL_2	3.726	1.073	3.490	1.241	102	2.253	0.026	0.593	0.000
LL_3 – RLL_3	3.549	1.140	3.598	1.237	102	-0.486	0.628	0.636	0.000
LL_4 – RLL_4	4.608	0.798	4.647	0.779	102	-0.684	0.495	0.731	0.000
LL_5 – RLL_5	4.010	1.231	4.059	1.193	102	-0.486	0.628	0.647	0.000
LL_6 – RLL_6	4.049	1.057	4.020	1.134	102	0.286	0.775	0.553	0.000
LL_7 – RLL_7	4.784	0.654	4.775	0.643	102	0.208	0.836	0.730	0.000
LL_8 – RLL_8	4.637	0.806	4.628	0.855	102	0.168	0.867	0.750	0.000
LL_9 – RLL_9	3.882	1.163	3.824	1.254	102	0.705	0.482	0.760	0.000
LL_10 – RLL_10	4.392	0.914	4.353	0.930	102	0.457	0.649	0.558	0.000
LL_11 – RLL_11	4.373	0.974	4.500	0.728	102	-1.311	0.193	0.363	0.000
LL_12 – RLL_12	4.549	0.791	4.696	0.686	102	-1.826	0.071	0.401	0.000
LL_13 – RLL_13	3.549	1.140	3.618	1,169	102	-0.702	0.484	0.634	0.000
LL_14 – RLL_14	3.490	1.272	3.451	1,232	102	0.321	0.749	0.515	0.000
LL_15 – RLL_15	4.029	1.067	4.128	1,021	102	-0.980	0.329	0.533	0.000
LL_16 – RLL_16	4.726	0.692	4.755	0,496	102	-0.456	0.650	0.437	0.000

FG-Feeling Good; RFG- Retest Feeling Good; LL-Living Life; RLL- Retest Living Life; ^aDependent Samples t-test; ^bPearson correlation; FG- Feeling Good; LL-Living Life.

CFA is widely recognised as an effective method for assessing the construct validity of measurement tools, particularly when adapting them across different populations and cultures (Erdoğan, Nahcivan, and Esin 2014). The CFA results demonstrated that the Turkish version of the FGLL scale exhibits a good fit with the data. Specifically, for the FG part, the fit indices were $\chi^2/df = 2.04$, GFI = 0.90, CFI = 0.90, RMSEA = 0.08, and RMR = 0.05, while for the LL part, the indices were $\chi^2/df = 1.62$, GFI = 0.90, CFI = 0.95, RMSEA = 0.06, and RMR = 0.06. These values fall within the acceptable range for fit indices, with the χ^2/df values below the threshold of 3.0, indicating an excellent fit (Büyüköztürk 2011). The RMSEA values of 0.08 for FG and 0.06 for LL, along with GFI and CFI values greater than 0.90 for both parts, further confirm the robustness of the model's fit. These findings are consistent with those of Parilakova and Babincak (2020), who reported similar fit indices in a study involving Slovak children aged 8 to 11. Specifically, their results for the FG part were $\chi^2/df = 2.16$, CFI = 0.95, and RMSEA = 0.06, and for the LL part, $\chi^2/df = 2.32$, CFI = 0.87, and RMSEA = 0.54. These parallels suggest that the Turkish version retains its factor structure across different cultural contexts (Parilakova and Babincak 2020).

CFA loadings were calculated for all the items of the FGLL questionnaire. For the LL part, after modifying the covariance between Items 9 and 12, the model fit improved, and

the factor structure remained stable, with factor loadings ranging from 0.70 to 0.76. This modification aligns with a similar approach used by Parilakova and Babincak (2020) to improve the model fit for the LL part in their study. These results further support the consistency of the Turkish FGLL with the original version.

Reliability, referring to the ability of a measurement tool to provide reproducible, consistent results on repeated trials, was strongly supported. Cronbach's alpha values for the FG and LL parts of the Turkish FGLL scale were 0.828 and 0.851, respectively, indicating high internal consistency ($\alpha > 0.80$). Subdimensions of the FG part showed alpha values between 0.73 and 0.84, while those for the LL part ranged from 0.69 to 0.85. These results align with previous findings: Fisher (2004), reported Cronbach's alpha values of 0.71 for the FG part and 0.84 for the LL part Fisher (2004). In a later study by Fisher (2016), Cronbach's alpha values for the same scale ranged from 0.84 to 0.85 (Fisher 2016). Similarly, Parilakova and Babincak (2020) found Cronbach's alpha values of 0.82 for the FG part and 0.79 for the LL part in the Slovak version, with subdimension alpha values ranging from 0.60 to 0.84 for the FG part and 0.60 to 0.80 for the LL part (Parilakova and Babincak 2020). Consistently, Bakker, Roodbol, and Leeuwen (2021) also reported Cronbach's alpha values of 0.63 for the FG part and 0.79 for the LL part (Bakker, Roodbol, and Leeuwen 2021). Collectively, these studies support the reliability of the Turkish version of the FGLL scale, demonstrating consistency with previous research.

The STAIC was used to analyse parallel forms reliability in this study. The SAI showed negative correlations with both the FG part ($r = -0.569$; $p < 0.05$) and the LL part ($r = 0.616$; $p < 0.05$). The TAI similarly exhibited negative correlations with the FG part ($r = -0.429$; $p < 0.05$) and the LL part ($r = -0.553$; $p < 0.05$). While no studies have specifically evaluated the FGLL with parallel forms reliability, previous research has reported negative correlations between spiritual well-being and anxiety using different measurement tools (Alshraifeen et al. 2020; Zarei et al. 2020).

A significant difference was observed between the lower 27% and upper 27% groups for the Turkish FGLL scores ($p < 0.05$), indicating that the scale provides precise measurements. The Spearman-Brown correlation coefficients ($r = 0.878$ for the FG and $r = 0.854$ for the LL) and the Guttman split-half coefficients ($r = 0.877$ for the FG and $r = 0.854$ for the LL) demonstrate that the scale items consistently measure the intended constructs and are effectively discriminative.

To assess time invariance, the test-retest method was employed. A subset of children ($n = 102$) completed the scale twice, two weeks apart, with no significant difference observed between the test-retest scores ($p > 0.05$). Significant test-retest correlations confirmed that participants provided consistent responses over time, thus supporting the temporal stability of the FGLL scale.

The sociocultural context of this study, conducted in Istanbul, Turkey, differs markedly from that of Fisher's studies in Australia. The Istanbul sample from the Kartal district reflects a predominantly Muslim population, with 99.8% of Turkey's population identifying as Muslim (Central Intelligence Agency 2019). Within this context, 65% of Turks are Sunni Muslims, with notable minorities practicing Shi'a Islam, Alevism, or identifying as secular or non-religious (WorldAtlas 2018). The study included children from both a Religious Vocational Secondary School and a general public secondary school, capturing a mix of religious affiliations and secular backgrounds, with 68.4% of the parents reporting regular religious practice.

In contrast, Fisher's studies were conducted in a more secular and religiously diverse Australian society. These contextual differences likely affect how children experience and interpret spiritual well-being, particularly dimensions related to transcendence. Turkish children, shaped by a more religious environment, may respond to spirituality-focused items differently than their Australian peers. Economically, the Turkish sample also reflected lower socio-economic conditions, with over half of the parents unemployed and 74.6% reporting income only meeting basic needs. In contrast, Australia's higher average income and employment levels may contribute to different patterns of spiritual expression.

Thus, cultural and socioeconomic factors should be considered when interpreting FGLL results across populations to ensure that the scale accurately reflects the spiritual dimensions of children's lives in different settings.

One limitation of this study is the gender imbalance in the sample, with 94.4% of participants being girls. This imbalance primarily stems from the study being conducted in religious vocational secondary schools that enrol only female students. Of the total sample, 88.7% ($n = 157$) were from religious vocational secondary schools, while only 11.3% ($n = 20$) were from public secondary schools. Although previous literature suggests no significant gender differences in spiritual well-being among children aged 8 to 11 years (Moodley 2008; Parilakova and Babincak 2023), these findings may have certain limitations in capturing the cultural, contextual, or linguistic nuances relevant to the Turkish adaptation of the 'Feeling Good, Living Life' (FGLL) scale. Preliminary exploratory analyses conducted in this study revealed the following descriptive statistics for males and females on the 'Feeling Good, Living Life' (FGLL) scale and its subdimensions: FGLL Total: Females ($M = 71.53$, $SD = 7.09$), Males ($M = 67.90$, $SD = 10.52$); Feeling Good – Self: Females ($M = 17.58$, $SD = 2.88$), Males ($M = 17.70$, $SD = 4.11$); Feeling Good – Others/Family: Females ($M = 18.83$, $SD = 2.18$), Males ($M = 17.30$, $SD = 4.85$); Feeling Good – Nature: Females ($M = 16.11$, $SD = 2.86$), Males ($M = 15.40$, $SD = 2.84$); Feeling Good – God: Females ($M = 19.01$, $SD = 1.96$), Males ($M = 17.50$, $SD = 4.01$). Living Life – Total: Females ($M = 67.28$, $SD = 8.32$), Males ($M = 63.70$, $SD = 13.63$); Living Life – Self: Females ($M = 15.86$, $SD = 3.66$), Males ($M = 14.70$, $SD = 5.76$); Living Life – Others/Family: Females ($M = 18.49$, $SD = 2.34$), Males ($M = 17.60$, $SD = 3.95$); Living Life – Nature: Females ($M = 14.45$, $SD = 3.30$), Males ($M = 14.10$, $SD = 3.87$); Living Life – God: Females ($M = 18.48$, $SD = 2.25$), Males ($M = 17.30$, $SD = 4.37$). However, due to the small number of male participants, only descriptive statistics were reported, and no inferential analyses were performed. These findings should therefore be interpreted with caution, particularly concerning male children and those from different school types. Future research should aim to recruit larger, more gender-balanced, and school-diverse samples to enable more robust statistical comparisons and to enhance the scale's overall validity and generalisability.

Conclusion

This study provides evidence supporting the validity and reliability of the Turkish version of the FGLL scale, making it a valuable tool for assessing spiritual well-being in children aged 9 to 12 years. Therefore the Turkish FGLL scale can be used in the clinical setting for this purpose. However, future studies should further explore its applicability in younger age groups, as well as among children with chronic conditions or special needs, to broaden its potential for clinical and research purposes.

Significance of findings

This study contributes to the growing body of knowledge on spiritual well-being among children and supports the use of the FGLL scale as a valid tool in non-Western contexts. The findings suggest that the scale can be adapted and used effectively in Turkey, with implications for future research on spiritual development in children from diverse cultural backgrounds.

Implications for future research

Future studies should explore the impact of gender and other socio-demographic factors on spiritual well-being among children. Additionally, further research should involve more diverse and random sampling methods to enhance the generalisability of the findings.

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Ethical consideration

Approval for the study was obtained from Bahçeşehir University Institutional Review Board (No: E-10655, Date: 30 June 2021). Permission to carry out the study in the secondary schools was obtained from XXX Provincial Directorate of National Education (No.: E-59090411-20-37253599, Date: 19 November 2021).

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