

Rasch-based Validation of Meaning of Life Scale of Students

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Abstract

Several countries have developed instruments to explore meaning of life for their citizens, in Indonesia, there has not been a concerted effort to create similar tools. The search for meaning of life remains a philosophical and personal question that has not received significant attention from the government or official institutions. As a society, a clear direction in achieving life goals without official guidance or adequate instruments to guide have continually been seek. This research objective to develop Meaning of Life Scale (MoLS) to explore and understand the significance of life of students. MoLS was administered to 207 respondents consisting of 72% females and 28% males, and data analysis was conducted using Rasch-based method. The results showed that MoLS was valid and reliable, while the 17-item of MoLS was successful at measuring the significance of life of students without gender bias. This research tends to have important implications in the fields of psychology and well-being, providing valuable insight for research and practitioners in understanding the role and influence of meaning of life of students.

INTRODUCTION

In recent years, the concept of meaning of life was found to be coinciding with an increased emphasis on various positive factors, such as psychological strengths (Ryan & Deci, 2001; Steger, 2017). Invariably, meaning of life is considered a positive element, serving as an indicator of overall well-being (Steger et al., 2006), a catalyst for adaptive coping strategies (Park & Folkman, 1997), and a marker of personal growth in therapy (Crumbaugh, 1977). Frankl (1966) found a profound connection between meaning of life and well-being, stating that the quest of meaning of life often correlates with feelings of emptiness and apathy, potentially leading to various psychological challenges. Recent research has suggested that meaning of life is not solely linked to psychological conditions but also offer physical health benefits (Brassai et al., 2011).

Economic pressure among impoverished students is associated with psychological distress (O'Neal et al., 2015) and social dysfunction. This is distinct in indigent groups compared to the less disadvantage (Liputo, 2014), giving rise to a variety of negative behaviors, and social outcomes resulting in melancholy (Noviawati & Narendri, 2017). Impoverished students tend to have an effect on low education (Rashid & Samat, 2018), working with inadequate skills (Cheung & Chou, 2016), earning low wages (Sasmal & Guillen, 2015), rising a new generation of poor families, as well as depreciating individual and societal prosperity

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(Woessmann, 2016). The chain of impoverished psychological conditions of students can be broken with the provision of quality education (Clarke & Feeny, 2013), although this is quite difficult to achieve (Martono, 2017).

The journey towards achieving success is intricately woven specifically the pursuit of life's profound significance. This quest becomes specifically poignant for underprivileged students who aspire to transcend the limitations of their impoverished circumstances. The focus of their pursuits is to discover the inherent meaning of life, as elucidated by Bastaman (2007), which can either lead individuals toward a life filled with purpose and depth or, conversely, steer them onto a path where their existence lacks significance.

An essential aspect of the pursuit of meaningful actions lies in the individuals of choices individuals make from the multitude of potential actions available to them. Luhmann's perspective, as cited in Goodman and Ritzer (2004) research, stated that these choices and subsequent actions are embedded within a broader tapestry of antecedent meaning of life. This intricate interplay indicated that before the trajectory of escaping poverty materializes, there exist preliminary layers of significance that set the foundation.

The essence of meaning of life, as described by Bastaman (2007), is characterized by its attributes of relevance, genuine authenticity, intrinsic value, and an irreplaceable significance. These attributes confer upon meaningful pursuits a profound sense of purpose, rendering them relevant as life's foremost objectives. This sentiment correlates with Baumeister's observations from the research of Fridayanti (2013), when it stated that meaning of life is inferred as a fundamental human need including purpose, self-worth, efficacy, and intrinsic value. This multidimensional conception of meaning of life, as delineated by Martela and Steger (2016), extends beyond a mere cognitive understanding, but it includes the fusion of psychological perception with aspirations and core values, thereby enveloping the entirety of human experience in its scope.

The emergence of meaning of life, as elucidated by Steger et al. (2011), arises from a dynamic interplay between interpretation, aspirations, and evaluation. This intricate interweaving culminates in a comprehensive understanding of life purpose, an unwavering commitment to its pursuit, and an acute awareness of the profound significance. In the exploration of the intricate facets of human experience, the concept of meaning of life has a position of profound significance. The quest for meaning of life among students who stand on the threshold of their academic and personal journeys, unveils a complex tapestry of thoughts, emotions, and aspirations. As the academic landscape evolves, there is a need for rigorous and precise measurement tools that can effectively capture the nuances of this existential pursuit. In this context, the "Meaning of Life Scale (MoLS) of Students" is found to be an instrument designed to determine the depths of perspectives of students meaning of life and significance.

Meaning of life Questionnaire (MLQ) (Steger et al., 2006) evaluated two dimensions of 10 items rated on a seven-point scale from "Absolutely True" to "Absolutely Untrue." The Presence of Meaning subscale measures how respondents perceive their lives to be meaningful. The Search for Meaning subscale measures respondents' engagement and motivation to spend effort, in order to find meaning in their lives. The Cronbach's alpha coefficients for Presence and Search ranged between 0.81 and 0.86 as well as 0.84 and 0.92, respectively. The one-month test-retest reliability coefficients for Presence and Search were 0.70 and 0.73, respectively. The research by Schulenberg et al. (2011) supported the test-retest and reliability of MLQ scores. Scores range from 5 to 35 on each subscale of the MLQ, with higher index indicate greater Presence and Search. The MLQ has already been validated in Spanish, Chinese, and Japanese (Steger et al., 2008; Wang & Dai, 2006).

Several countries have developed instruments to explore meaning of life for their citizens, in Indonesia, there has not been a concerted effort to create similar tools. The search for meaning of life remains a philosophical and personal question that has not received

significant attention from the government or official institutions. As a society, a clear direction in achieving life goals without official guidance or adequate instruments to guide have continually been seek.

This research aims to validate the Indonesian version of MoLS (Frankl, 1966, 1984), as well as contributes to the literature regarding meaning of life preferences of various individuals and groups in the country. This research is recommended to provide understanding of MoLS in the context of gender and West Sumatra province.

METHODS

Scale Development

Several steps were taken to develop MoLS (Frankl, 1966, 1984), including conducting an extensive literature review to assess all common scale regarding Meaning of Life. Thirty-six measurement items were identified for self-assessment, which can be interpreted as the values originating from responses to personal conditions, the environment, and serving as guidelines. When creative, experiential, and attitudinal values corroborate, an individual can find meaning of life. After removing items with similar content or expression, 28 instruments were retained for further evaluation. Professionals including psychologists, therapists, health psychologists, psychiatrists, and general practitioners conducted a validation process for 28 items, of which 5 were eliminate. The remaining 23 were sent to various groups consisting of health education, counseling, social psychologists, and academic specialists for review. Six items were removed based on comments from the second validation process. The 17 effective items were tested on 207 respondents consisting of 58/28 % male and 149/72 % female in Padang City to obtain an initial assessment of scale. A five-point Likert scale was used to test whether individuals understood the item descriptions. Telephone-based cognitive interviews were conducted with the same trial participants to explore their thoughts about each item and their responses. Further changes were not made as trial participants indicated that no adjustments were required. For more details, you can see the blueprint for the meaning of life instrument which is ready to be tested on 207 respondents (Table 1).

Table 1. Blueprint for The Meaning of Life Instrument

Variable	Aspect	Indicator	Items
The meaning of life itself can be interpreted as the values of an individual's life which originate from responses to self and environmental conditions in every part of his life. Meaning of life contains values that are used as life guidelines that are important, valuable, and originate from creative values, experiential values, and attitudinal values. If these three values are successfully fulfilled, the individual will gain meaning in his life (Frankl, 1966, 1984).	Creative Value	Generate, discover, create meaningful activities in life	M5, M11
		Carrying out life tasks with full commitment and responsibility	M2, M10
	Experiential Values	Believing and living the value of love	M3, M7, M9
		Believing and living up to religious values	M1, M13
		Believing and experiencing truth, virtue and beauty	M4, M15, M17
	Attitudinal Values	The right attitude towards fate that can no longer be avoided	M14, M16, M12
		Attitude towards life's challenges	M6, M8
	Total Items		17

Ethics Approval

Ethical approval Number: 325/EC/IKI/VII/2023 was obtained from the official counseling professional organization, the Indonesian Counselors Association, Jakarta, Indonesia. Participants agreed to participate in research and publication of results, subject to ethical approval.

Design, Procedures, and Participants

A cross-sectional design was used in evaluating the internal construct validity of MoLS (Meaning of Life Instrument). Respondents were invited to take part in this research through messages conveyed via the WhatsApp application, where initial information were provided explaining the purpose of this research without any element of coercion or pressure to participate. The message was communicated clearly, giving the opportunity to voluntarily consent to take part based on their understanding, with the guarantee of confidentiality regarding all the personal information obtained from respondents.

Data and statistical analysis

Rasch analysis was used following the protocol proposed by Boone et al. (2014). George Rasch, a Danish mathematician created analysis also known as Rasch Model or Measurements in 1960 (Bond & Fox, 2007). The research is based on Item Response Theory (IRT), examining the relationship between item attributes and respondents' abilities (Cavanagh & Waugh, 2011). Rasch analysis is known to have a different method from Classical Test Theory (CTT), highly dependent on the sample, has a non-linear structure, and only produces scores within a certain range (DeMars, 2018; Embretson & Reise, 2013; Engelhard Jr & Wind, 2017).

Rasch analysis forms a measurement line with items arranged hierarchically, providing goodness-of-fit statistics to indicate the accuracy of various items in describing the group of subjects as a whole and each subject's feature (Prieto et al., 2003). To ensure that the rating scale-based instruments are well standardized and suitable for use, Rasch analysis is used to avoid the problem of using total raw scores (Ekstrand et al., 2022; Pendrill, 2019; Wright & Linacre, 1989).

The application of Rasch analysis has several advantages, including providing consistent linear measures, producing accurate estimates, identifying imprecise or unusual items or individuals, dealing with missing data, creating replicable data and independent measurements (Andrich et al., 2019; Sumintono, B., & Widhiarso, 2015). Rasch analysis is known to support linear measurements based on ordinal rating scale item responses, which is less known, because it is expressed in "Logit", that is, a score different from the previously known index. "Logit" stands for "Log-Odds Unit" of measurement in Rasch analysis reflecting the difference between an individual's ability and the level of difficulty of an item (Ludlow & Haley, 1995; Mari & Wilson, 2014). Rasch analysis also provides more in-depth diagnostic information for scale expansion (Boone, 2016), and added value for obtaining accurate estimates of psychometric properties in the context of MoLS.

The computer program Winsteps (version 5.1.5) and its user guide (Linacre, 2022) were used to evaluate the fit of observed data (Boone et al., 2014; Sumintono, B., & Widhiarso, 2015). MoLS was analyzed to determine its overall fit with Rasch analysis, diagnostic rating scale, targeting, unidimensionality and local independence assumptions, item measures, fit indices, and measurement precision. A summary of the aspects and measurement criteria used in Rasch analysis is presented in Table 2.

Visual shows were used via Wright-map to assess the distribution of items and people in Rasch's "Logit Ruler", expanding the interpretation of respondents' abilities and item difficulty. Differential Item Functioning (DIF) testing was conducted in groups based on gender differences, and a comprehensive understanding was provided by describing score

comparisons between MoLS and points from various versions of HAM-A collected from different locations around the world.

Table 2. Measurement Criteria in Rasch

Measurement Properties	Objective	Measurement Criteria
Misfit Item	To assess when an item is correlating consistently with the anticipated outcomes. Items that do not fit also signal the participants' misunderstandings regarding the items (Sumintono, B., & Widhiarso, 2015)	Outfit MNSQ ranging in $0.5 < \text{MNSQ} < 1.5$ indicates that the data is in accordance with the model (Boone et al., 2014; Linacre, 2022)
Internal Consistency Reliability and Separation Indices	Reliability describes the stability of the measurement results Separation indices evaluate whether items in MoLS domain can differentiate varying levels of meaning of life	Reliabilities of > 0.70 are considered acceptable, showing good internal consistency (Bond & Fox, 2015; Tennant et al., 2011). Person separation indices of > 1.5 logits are considered acceptable (Tennant et al., 2011).
Unidimensionality and Local Dependency	Unidimensionality represents that only one construct is measured by the items in a questionnaire (Meaning of Life) (Brentani & Golia, 2007). Local dependency shows when participant answer patterns depend on other test item besides their overall trait level (Tennant et al., 2011).	Principal component analysis, with approximately 40% of the variance explained (Linacre, 2022). Inter-item residual correlations of > 0.70 , the average residual correlation, indicates significant local of dependency (Linacre, 2009)
Item and Person Measure	To assess a person's abilities and item difficulties	The Wright-map
Item Bias via DIF Analysis	To evaluate the degree of group bias in each MoLS domain's items (e.g., male versus female).	Item DIF Prob < 0.05 , with DIF Contrast of > 0.64 logits.
Precision Measurement	To assess compatibility aspects between models and data	$0.32 < \text{Pt. measure Corr.} < 0.80$ is considered acceptable

RESULTS AND DISCUSSION

Overall in Accordance with Rasch Measurement Model

The results of Rasch analysis for MoLS are shown in Table 3. The individual reliability index (0.90) reflected good consistency, while the item reliability index (0.97) showed very good quality. Cronbach's alpha coefficient (0.93) also indicated that MoLS exhibits 'good' internal consistency, conferring this instrument as a reliable tool. Table 3 also presents *the Person Separation* (3.09) and *Item Separation* (5.66) values, which indicate MoLS's capability to separate various levels of individual ability as hidden attributes and variations in item distribution. This showed that MoLS scale has the potential to summarize the range of individual ability from low to very high, formulating good questions, both easy and difficult (Tennant et al., 2011).

The results indicated that MoLS is a suitable and reliable tool for measuring Meaning of Life, providing a satisfactory distribution among various respondents and component items. Table 3 also shows the average value of item and sizes of 2.98 logit, representing that the average ability of individuals who fill out this scale tends to have a high level of Meaning of Life.

Table 3. Summary statistics of person and item (I = 17, N = 207)

	Reliability	Separation index	mean measure*)	Cronbach's alpha	Raw variance explained by measure**)
Person	0.90	3.09	2.98	0.93	48.2%
Items	0.97	5.66	0.00		

*) Measure in Logit.

**) Computed via Principal Component Analysis (PCA)

Unidimensional and Local Dependencies

Rasch principal component analysis showed that MoLS had an explainable variation of 48.2% (eigenvalue 15.8), exceeding the established minimum (>40%), and an unexplained variation of less than 15% at the first contrast (7.8%, eigenvalue 2.57). This result indicated that the unidimensionality assumption for MoLS has been met. Based on the results of the local dependency assumption test, two highest correlations were identified in MoLS, namely 0.69 with a positive direction in M13 (No matter how difficult life is, there are still lessons that I can take) and M15 (I believe that one day I will be able to live happy). This is because the correlation of standardized residuals for any pair of items in MoLS does not exceed +0.70 in the positive direction (Linacre, 2009), indicating that local dependency has no effect on items. Taking into account that the standard correlation of each item pair in MoLS did not exceed > 0.70 in the positive direction.

Items Measure, Fit Indices, and Precision Measurements

Table 4 presents statistical measures of MoLS including item size, suitability level to produce measurement productivity (infit and outfit MNSQ), resulting measurement accuracy level (SE Model), and item discrimination (Point Measure Correlation). As shown in Table 4, item 3 with code M3 (I carry out every task assigned to me with full responsibility) was the most difficult item (1.56 logit) for all respondents. Meanwhile, M7 (I think the most essential happiness in life is making my parents happy to have me) has the lowest level of difficulty (-1.37 logit). All MoLS items had MNSQ Outfit between $0.5 < \text{MNSQ} < 1.5$, indicating that the data fits the model. The "Model SE" column represented the "Standard Error of Measurement" for each item, and the standard error of the proposed instrument is in the range of items included in the acceptable criteria because $0.32 < x < 0.80$ (Abdullah & Lim, 2013).

Table 4. The summary of item measure (I = 17, N = 207)

Items	Total Score	measures	SE Models	Infit		Outfits		Pt. Measure Corr.
				MNSQ	ZSTD	MNSQ	ZSTD	
M3	793	1.56	0.13	1.21	2.16	1.18	1.80	0.63
M1	820	1.08	0.13	1.38	3.55	1.37	3.37	0.57
M6	842	0.69	0.13	1.30	2.87	1.39	3.45	0.60
M4	845	0.64	0.13	0.92	-0.86	0.94	-0.59	0.69
M10	847	0.60	0.13	1.21	2.04	1.15	1.41	0.63
M11	847	0.60	0.13	0.86	-1.50	0.86	-1.39	0.70
M15	866	0.26	0.13	0.63	-4.44	0.60	-4.45	0.79
M17	873	0.14	0.13	0.75	-2.86	0.77	-2.36	0.74
M12	875	0.10	0.13	0.68	-3.77	0.69	-3.32	0.77
M13	880	0.01	0.14	0.60	-4.81	0.58	-4.67	0.77
M2	898	-0.33	0.14	1.05	0.59	1.13	1.16	0.62
M8	911	-0.57	0.14	1.43	4.12	1.38	2.93	0.58
M14	920	-0.75	0.14	0.96	-0.40	0.98	-0.67	0.67
M9	924	-0.83	0.14	0.87	-1.40	0.84	1.33	0.67
M5	928	-0.91	0.14	1.16	1.72	1.22	1.62	0.60
M16	929	-0.93	0.14	1.05	0.58	0.93	-0.47	0.66

M7	950	-1.37	0.15	0.95	-0.56	0.99	-0.02	0.65
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Person measure and the Wright-map

In addition to item, individual size was also presented to assess Meaning of Life, and the results of these measurements were shown in Table 5. Based on Rasch calculations obtained, Table 5 indicated the five top and least responses of the 207 respondents. The highest Meaning of Life was 6.79 logits, with Standard Error (SE) of 1.04, achieved by 149 female respondents. While 58 male respondents have the lowest Meaning of Life with -1.87 logit and SE of 0.60, compared to all respondents involved. Based on the item parameter estimates obtained, the Wright map to measure the distribution of respondents' abilities was used as well as item difficulty levels on the "Rasch Ruler" with similar logit levels. Visualization of Wright's map for MoLS and the procedure in assessing Meaning of Life, were presented in Figure 1. Through this mechanism, the pattern of distribution of respondents can be compared on the Wright map as well as that of items based on Rasch calculations. This comparison became feasible due to the consistent units for both people and goods, as well as the uniform unit intervals of logits (Boone et al., 2014). This enabled further comparisons to be made between-individual comparisons (for example, 26 students have a higher Meaning of Life than 181) and between-item (for example, M3 is easier to agree on than M7). Through this mechanism, items and people were compared (there is a good chance that 173 people will agree with M3 on some factors, or 58 individuals are likely to disagree with M7 on some variables).

Table 5. The summary of person measure (I = 17; N = 207)

Number	Total Score	measures	SE Models	Infit		Outfits		Pt. Measure Corr.
				MNSQ	ZSTD	MNSQ	ZSTD	
100	84	6.79	1.04	1.01	0.31	0.72	0.17	0.19
183	84	6.79	1.04	1.07	0.38	1.13	0.51	0.04
30	83	6.00	0.77	0.78	-0.21	0.49	-0.50	0.51
49	83	6.00	0.77	0.86	-0.07	0.71	-0.12	0.38
59	83	6.00	0.77	1.75	1.25	0.78	-0.02	0.49
178	46	-3.53	0.53	1.36	1.21	1.37	1.09	0.35
199	48	-2.93	0.57	1.08	0.32	1.22	0.60	-0.28
111	51	-1.87	0.61	0.09	-3.05	0.08	-3.04	0.00
10	51	-1.87	0.61	0.09	-3.05	0.08	-3.04	0.00
8	51	-1.87	0.60	0.09	-3.05	0.08	-3.04	0.00

Table 6. Results of DIF on MoLS items (I = 17, N = 207).

Item Codes	Prob.
M1	0.17
M2	0.38
M3	0.56
M4	0.85
M5	0.45
M6	0.91
M7	1.00
M8	1.00
M9	0.16
M10	0.12
M11	0.35
M12	0.61
M13	0.53
M14	0.46
M15	0.52
M16	0.77
M17	0.35

The DIF analysis

The DIF analysis showed that there were no items affected by DIF ($\text{prob} > 0.05$) for gender respondent subgroup. All items in Meaning of Life instrument were free from gender bias, as evidenced by the large prob value of 0.05 (Table 6). In line with research by Travezaño-Cabrera et al. (2022) concerning the factorial invariance of the questionnaire, it was indicated that the items can measure Meaning of Life in men and women with the same precision and consistency. This result also suggests that men and women understand the MLQ-measured Meaning of Life equally, supporting the measurement-free comparisons between the two groups (Dimitrov, 2010). This outcome is also consistent with the invariance results in China and Brazil (Damásio & Koller, 2015; Datu & Yuen, 2022).

MLQ Score

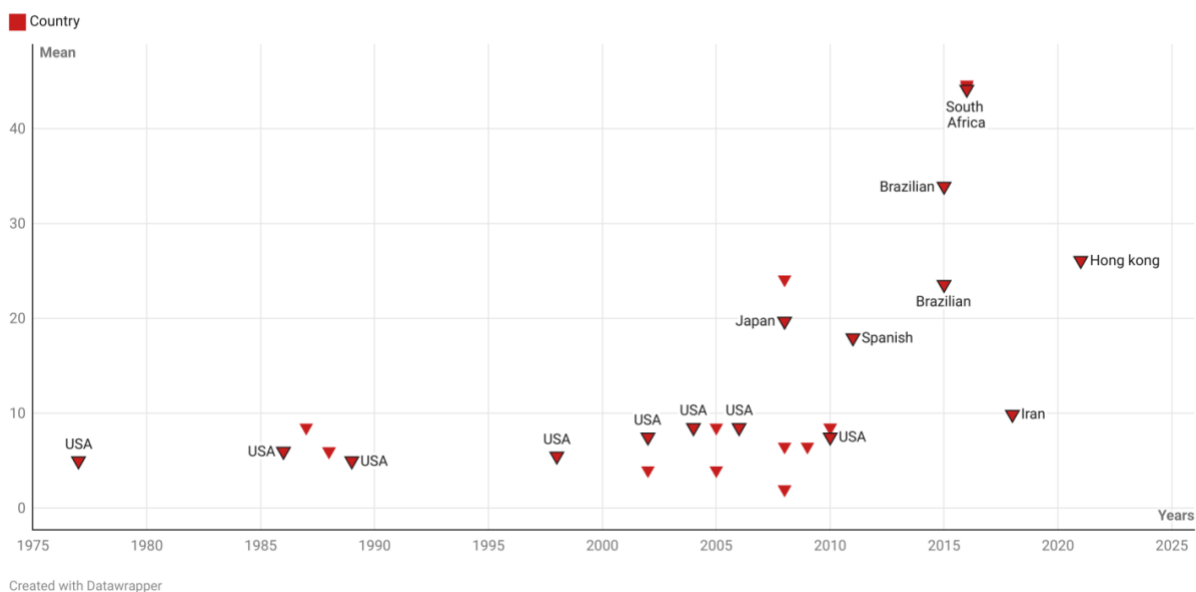


Figure 1. Trend of MLQ in 1997-2021

This figure showed the frequency MLQ obtained from the research of (Bernard et al., 2015; Brown et al., 2008; Byron & Miller-Perrin, 2009; Crumbaugh & Maholick, 1964; Damásio et al., 2013; Damásio & Koller, 2015; Eakman et al., 2010; Fife, 1995; Goldberg et al., 2002; Hong, 2008; Hutzell & Peterson, 1986; Lyon & Younger, 2005; Mascaro et al., 2004; Mayers et al., 2002; Noblejas De La Flor, 1997; Orang et al., 2018; Park et al., 2008; Prager, 1996; Scheier et al., 2006; Schutte et al., 2016; Thompson et al., 1989; Van den Heuvel et al., 2009; Waterman et al., 2010)

Comparing MoLS to other MLQ around the world

To show the comprehensive relationship between MLQ and related scale developed worldwide, trendlines were created, as depicted in Figure 1. From 1977 to 2021, Australians consistently exhibited the highest average MLQ score, standing at 44.65, surpassing other countries (Schutte et al., 2016). South Africa follows closely as the second highest-scoring country, with an MLQ score of 44.11.

Figure 1 further shows that the United States has been the most active in conducting MLQ research, totaling 13 instances, each yielding different Meaning of Life satisfaction scores. This include the research by Prager (1996) which reported a score of 6, Crumbaugh & Maholick (1974) found 8, Park et al. (2008) discovered 24.1, Waterman et al. (2010) reported 8.5, Eakman et al. (2010) found 6.5, and more details can be seen in Figure 1 (Byron & Miller-Perrin, 2009; Fife, 1995; Goldberg et al., 2002; Hutzell & Peterson, 1986; Lyon & Younger,

2005; Mayers et al., 2002; Scheier et al., 2006; Thompson et al., 1989). The research conducted by Hong (2008) in China recorded a score of 4, Mascaro et al. (2004) in Canada found 6, Brown et al. (2008) in UK reported 6.5, Van den Heuvel et al. (2009) in Netherland discovered 8.5, and Noblejas De La Flor (1997) in Spanish observed 2.

Denmark, which received the lowest Meaning of Life score (as stated by Pontes et al., 2016), also showed the lowest average MLQ score of 2.0. Conversely, this research indicated Indonesia's exceptional performance in MLQ scores, measured by MoLS. Indonesia ranks first among all countries with an impressive score of 46.7, surpassing global trends, and emphasizing the importance of exploring meaning of life in various cultural contexts.

Discussion

This research has made a valuable contribution to the existing literature by being a pioneer in translating, validating, and offering psychometric property for the Indonesian version of MoLS. This work used a new method of Rasch analysis, different from other common methods to verify similar scale. The results provided confirmation that the Indonesian MoLS showed satisfactory psychometric properties for assessing Meaning of Life, specifically in the context of the population in Padang City. It was found that the common MoLS exhibits unidimensionality, has no local dependencies, and offers a robust measure, as it contains no erroneous items compared to the model being examined. In addition, the developed MoLS showed commendable reliability, both individually and in items.

Figure 2 shows Rasch maps of people's Wright items for MoLS ($n = 207$), indicating the elements of a Wright map. The right side of the map shows the distribution of the most difficult Meaning of Life items at the top to the easiest at the bottom. The left shows the distribution of respondents' measured abilities, from the least at the bottom to the most capable at the top. Wright-map directly compares the two in one logit Rasch "bar". M (p): average individual ability, S (p): one standard deviation of a person's ability, T (p): two standard deviations from individual's ability, M (i): average item quality, S (i): one standard deviation from the item means, and T (i): two standard deviations from the item mean. While the symbol "#" represents 2 people, and "." represents 1 person. Person's SD = 2.00, and Item's SD = 0.79.

The Item Separability Index (5.66) indicated the relative repeatability of measurement locations for the 17 MoLS items. These results were not followed by the Person Separation index which only showed 3.09 logs. According to (Linacre, 2022), when the low separation of people is < 0.8 with a relevant sample, it implies that the instrument may lack sensitivity to differentiate between respondents with high, medium, and low levels of Meaning of Life. This situation is acceptable, as long as person separation is > 1.5 log (Tennant et al., 2011). Although, separate indices do not report data quality (Boone et al., 2014; Linacre, 2022), the range of respondents' abilities can be divided into three characteristics (high, medium, and low). According to Rasch calculations, a large MoLS score > 6.79 indicates a high Meaning of Life but the individual or group assessed in this research has a score of low MoLS < 0.84 Logit (Figure 2).

The implications of this analysis extend to the domains of psychology and well-being. By providing a valid and reliable means of quantifying the intricate concept of life meaning, MoLS enables both research and practitioners in comprehending the profound role that Meaning of Life plays in individuals' existence. This novel understanding can facilitate more nuanced interventions aimed at enhancing psychological well-being and quality of life. The development of a trustworthy tool like MoLS equips professionals with the capacity to explore, evaluate, and promote Meaning of Life, contributing significantly to the advancement of knowledge in psychology and well-being research.

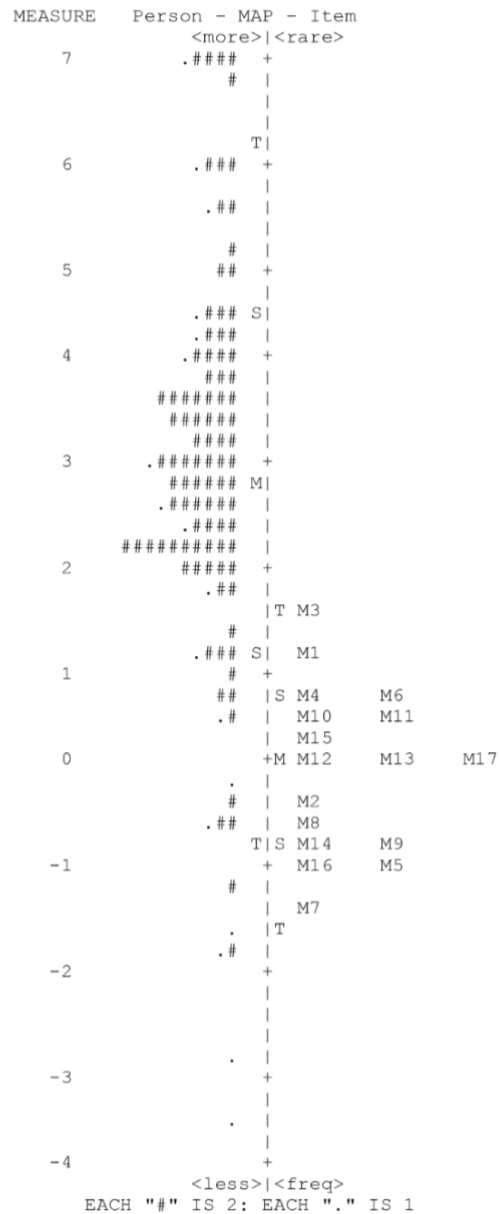


Figure 2. Wright-map Person and Item

CONCLUSION

MoLS was found to be valid and reliable, while the 17-item scale was successful at measuring individual's life without gender bias. The results showed that MoLS was a 17-item unidimensional scale with strong psychometric properties, suitable for identifying and measuring the level of Meaning of Life in the researched population. In addition, this scale yields consistent results across gender, making it universally applicable irrespective of identity. These implications showed that MoLS is a reliable and valid instrument for use in research and measurement of Meaning of Life in the city of Padang, as well as in the fields of psychology and well-being. This instrument is recommended to assist research and practitioners in understanding the role and influence of Meaning of Life on individuals' existence.

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AUTHOR CONTRIBUTION STATEMENT

The study was undertaken through an analysis of the issues, theoretical frameworks, and potential interventions. II, KB, YM, NZ and RPF gather data and subsequently formulate a study proposal. In order to provide NZ and RPF with research, additional studies and expert consultations were carried out with II, KB, and YM. Subsequently II, KB, YM, NZ and RPF proceed to generate research reports. The data collected is evaluated by II, KB and YM. Following the completion of the evaluation, II, KB, YM, RPF and NZ collaborate to provide a detailed report.

REFERENCES

- Abdullah, N., & Lim, B. K. (2013). Parallel circuit conceptual understanding test (PCCUT). *Procedia-Social and Behavioral Sciences*, 90, 431–440. <https://doi.org/10.1016/j.sbspro.2013.07.112>
- Andrich, D., Marais, I., Andrich, D., & Marais, I. (2019). Reliability and Validity in Classical Test Theory. *A Course in Rasch Measurement Theory: Measuring in the Educational, Social and Health Sciences*, 41–53. https://doi.org/10.1007/978-981-13-7496-8_4
- Bastaman, H. D. (2007). *Logoterapi: Psikologi untuk menemukan makna hidup dan meraih hidup bermakna*, Jakarta: PT. Raja Grafindo.
- Bernard, M., Braunschweig, G., Fegg, M. J., & Borasio, G. D. (2015). Meaning in life and perceived quality of life in Switzerland: results of a representative survey in the German, French and Italian regions. *Health and Quality of Life Outcomes*, 13, 1–10. <https://doi.org/10.1186/s12955-015-0353-y>
- Bond, T. G., & Fox, C. M. (2007). *Applying the Rasch Model: Fundamental Measurement in the Human Sciences* (2nd ed.). Psychology Press.
- Bond, T. G., & Fox, C. M. (2015). *Applying the Rasch Model, Fundamentals Measurement in the Human Science* (3rd edition). Routledge.
- Boone, W. J. (2016). Rasch analysis for instrument development: Why, when, and how? *CBE—Life Sciences Education*, 15(4), rm4. <https://doi.org/10.1187/cbe.16-04-0148>
- Boone, W. J., Stever, J. R., & Yale, M. S. (2014). *Rasch Analysis in the Human Science*. Springer. <https://doi.org/10.1007/978-94-007-6857-4>
- Brassai, L., Piko, B. F., & Steger, M. F. (2011). Meaning in life: Is it a protective factor for adolescents' psychological health? *International Journal of Behavioral Medicine*, 18, 44–51. <https://doi.org/10.1007/s12529-010-9089-6>
- Brentani, E., & Golia, S. (2007). Unidimensionality in the Rasch model: how to detect and interpret. *Statistica*, 67(3), 253–261.
- Brown, G. P., Roach, A., Irving, L., & Joseph, K. (2008). Personal meaning: A neglected transdiagnostic construct. *International Journal of Cognitive Therapy*, 1(3), 223–236. <https://doi.org/10.1521/ijct.2008.1.3.223>
- Byron, K., & Miller-Perrin, C. (2009). The value of life purpose: Purpose as a mediator of faith and well-being. *The Journal of Positive Psychology*, 4(1), 64–70. <https://doi.org/10.1080/17439760802357867>
- Cavanagh, R. F., & Waugh, R. F. (2011). *Applications of Rasch measurement in learning environments research* (Vol. 2). Springer Science & Business Media. <https://doi.org/10.1007/978-94-6091-493-5>

- Cheung, K. C.-K., & Chou, K.-L. (2016). Working poor in Hong Kong. *Social Indicators Research*, 129, 317–335. <https://doi.org/10.1007/s11205-015-1104-5>
- Clarke, M., & Feeny, S. (2013). Old challenges and new opportunities for the MDGs: Now and beyond 2015. In *Millennium Development Goals* (pp. 1–11). Routledge. <https://doi.org/10.4324/9780203718636-7>
- Crumbaugh, J. C. (1977). The seeking of noetic goals test (SONG): A complementary scale to the purpose in life test (PIL). *Journal of Clinical Psychology*, 33(3), 900–907. [https://doi.org/10.1002/1097-4679\(197707\)33](https://doi.org/10.1002/1097-4679(197707)33)
- Crumbaugh, J. C., & Maholick, L. T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology*, 20(2), 200–207. [https://doi.org/10.1002/1097-4679\(196404\)20](https://doi.org/10.1002/1097-4679(196404)20)
- Damásio, B. F., & Koller, S. H. (2015). Meaning in Life Questionnaire: Adaptation process and psychometric properties of the Brazilian version. *Revista Latinoamericana de Psicología*, 47(3), 185–195. <https://doi.org/10.1016/j.rlp.2015.06.004>
- Damásio, B. F., Koller, S. H., & Schnell, T. (2013). Sources of Meaning and Meaning in Life Questionnaire (SoMe): Psychometric properties and sociodemographic findings in a large Brazilian sample. *Acta de Investigación Psicológica*, 3(3), 1205–1227. [https://doi.org/10.1016/S2007-4719\(13\)70961-X](https://doi.org/10.1016/S2007-4719(13)70961-X)
- Datu, J. A. D., & Yuen, M. (2022). Factorial validity of meaning in life questionnaire in Hong Kong secondary school students: a construct validation approach. *Counselling Psychology Quarterly*, 35(2), 467–480. <https://doi.org/10.1080/09515070.2021.1875989>
- DeMars, C. E. (2018). *Classical test theory and item response theory. The Wiley handbook of psychometric testing: A multidisciplinary reference on survey, scale and test development*. <https://doi.org/10.1002/9781118489772.ch2>
- Dimitrov, D. M. (2010). Testing for factorial invariance in the context of construct validation. *Measurement and Evaluation in Counseling and Development*, 43(2), 121–149. <https://doi.org/10.1177/0748175610373459>
- Eakman, A. M., Carlson, M. E., & Clark, F. A. (2010). The meaningful activity participation assessment: A measure of engagement in personally valued activities. *The International Journal of Aging and Human Development*, 70(4), 299–317. <https://doi.org/10.2190/AG.70.4.b>
- Ekstrand, J., Westergren, A., Årestedt, K., Hellström, A., & Hagell, P. (2022). Transformation of Rasch model logits for enhanced interpretability. *BMC Medical Research Methodology*, 22(1), 1–10. <https://doi.org/10.1186/s12874-022-01816-1>
- Embretson, S. E., & Reise, S. P. (2013). Item response theory. In *Quality of Life Research*. Psychology Press. <https://doi.org/10.4324/9781410605269>
- Engelhard Jr, G., & Wind, S. (2017). *Invariant Measurement with Raters and Rating Scales: Rasch Models for Rater-Mediated Assessments*. Routledge Taylor dan Francis Group. <https://doi.org/10.4324/9781315766829>
- Fife, B. L. (1995). The measurement of meaning in illness. *Social Science & Medicine*, 40(8), 1021–1028. [https://doi.org/10.1016/0277-9536\(94\)00174-R](https://doi.org/10.1016/0277-9536(94)00174-R)
- Frankl, V. E. (1966). What is meant by meaning? *Journal of Existentialism*.
- Frankl, V. E. (1984). *Search for meaning*. Mount Mary College Milwaukee, WI, USA.
- Fridayanti, F. (2013). Pemaknaan Hidup (meaning in life) dalam kajian psikologi. *Psikologika: Jurnal Pemikiran Dan Penelitian Psikologi*, 18(2), 198–789. <https://doi.org/10.20885/psikologika.vol18.iss2.art8>
- Goldberg, B., Brintnell, E. S., & Goldberg, J. (2002). The relationship between engagement in meaningful activities and quality of life in persons disabled by mental illness. *Occupational Therapy in Mental Health*, 18(2), 17–44. https://doi.org/10.1300/J004v18n02_03

- Goodman, G. R.-D. J., & Ritzer, G. (2004). Teori sosiologi modern. *Jakarta: Prenada Media*.
- Hong, L. (2008). College stress and psychological well-being: Self-transcendence meaning of life as a moderator. *College Student Journal*, 42(2).
- Hutzell, R. R., & Peterson, T. J. (1986). Use of the Life Purpose Questionnaire with an alcoholic population. *International Journal of the Addictions*, 21(1), 51–57. <https://doi.org/10.3109/10826088609063437>
- Linacre, J. M. (2009). Local independence and residual covariance: A study of Olympic figure skating ratings. *Journal of Applied Measurement*, 10(2), 157–169.
- Linacre, J. M. (2022). *A User's Guide to WINSTEPS MINISTEP Rasch-Model Computer Programs*. In winsteps.com.
- Liputo, S. (2014). Distres psikologik dan disfungsi sosial di kalangan masyarakat miskin kota malang. *Psychological Journal: Science and Practice*, 2(3), 286–295.
- Ludlow, L. H., & Haley, S. M. (1995). Rasch model logits: Interpretation, use, and transformation. *Educational and Psychological Measurement*, 55(6), 967–975. <https://doi.org/10.1177/0013164495055006005>
- Lyon, D. E., & Younger, J. (2005). Development and preliminary evaluation of the existential meaning scale. *Journal of Holistic Nursing*, 23(1), 54–65. <https://doi.org/10.1177/0898010104272292>
- Mari, L., & Wilson, M. (2014). An introduction to the Rasch measurement approach for metrologists. *Measurement*, 51, 315–327. <https://doi.org/10.1016/j.measurement.2014.02.014>
- Martela, F., & Steger, M. F. (2016). The three meanings of meaning in life: Distinguishing coherence, purpose, and significance. *The Journal of Positive Psychology*, 11(5), 531–545. <https://doi.org/10.1080/17439760.2015.1137623>
- Martono, N. (2017). *Sekolah publik vs sekolah privat: dalam wacana kekuasaan, demokrasi, dan liberalisasi pendidikan*. Yayasan Pustaka Obor Indonesia.
- Mascaro, N., Rosen, D. H., & Morey, L. C. (2004). The development, construct validity, and clinical utility of the spiritual meaning scale. *Personality and Individual Differences*, 37(4), 845–860. <https://doi.org/10.1016/j.paid.2003.12.011>
- Mayers, A. M., Khoo, S., & Svartberg, M. (2002). The Existential Loneliness Questionnaire: background, development, and preliminary findings. *Journal of Clinical Psychology*, 58(9), 1183–1193. <https://doi.org/10.1002/jclp.10038>
- Noblejas De La Flor, M. A. (1997). Meaning levels and drug-abuse therapy: An empirical study. *International Forum for Logotherapy*, 20, 46–52.
- Noviawati, P., & Narendri, N. I. (2017). Nilai-nilai kemiskinan pada masyarakat miskin di daerah perkotaan dan pedesaan: Ditinjau berdasarkan analisis atribut psikologis. *Prosiding Industrial Research Workshop and National Seminar*, 8, 265–273.
- O'Neal, C. W., Arnold, A. L., Lucier-Greer, M., Wickrama, K. A. S., & Bryant, C. M. (2015). Economic pressure and health and weight management behaviors in African American couples: A family stress perspective. *Journal of Health Psychology*, 20(5), 625–637. <https://doi.org/10.1177/1359105315579797>
- Orang, S., Razini, H. H., & Ramshini, M. (2018). Investigating the meaning of life and psychological well-being, in youth, adults, and elderly (a comparative study of three age groups). *Iranian Journal of Ageing*, 13(2), 182–197. <https://doi.org/10.32598/sija.13.2.182>
- Park, C. L., Edmondson, D., Fenster, J. R., & Blank, T. O. (2008). Meaning making and psychological adjustment following cancer: the mediating roles of growth, life meaning, and restored just-world beliefs. *Journal of Consulting and Clinical Psychology*, 76(5), 863. <https://doi.org/10.1037/a0013348>

- Pendrill, L. (2019). *Quality assured measurement*. Springer. <https://doi.org/10.1007/978-3-030-28695-8>
- Prager, E. (1996). Exploring personal meaning in an age-differentiated Australian sample: Another look at the Sources of Meaning Profile (SOMP). *Journal of Aging Studies*, 10(2), 117–136. [https://doi.org/10.1016/S0890-4065\(96\)90009-2](https://doi.org/10.1016/S0890-4065(96)90009-2)
- Prieto, L., Alonso, J., & Lamarca, R. (2003). Classical test theory versus Rasch analysis for quality of life questionnaire reduction. *Health and Quality of Life Outcomes*, 1, 1–13. <https://doi.org/10.1186/1477-7525-1-1>
- Rashid, S. M. R. A., & Samat, N. (2018). Kemiskinan keluarga dan pengaruhnya terhadap tahap pendidikan rendah masyarakat luar bandar: Kajian kes di Jajahan Bachok, Kelantan. *E-BANGI*, 13(2), 11–23.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52(1), 141–166. <https://doi.org/10.1146/annurev.psych.52.1.141>
- Sasmal, J., & Guillen, J. (2015). Poverty, educational failure and the child-labour trap: The Indian experience. *Global Business Review*, 16(2), 270–280. <https://doi.org/10.1177/0972150914564419>
- Scheier, M. F., Wrosch, C., Baum, A., Cohen, S., Martire, L. M., Matthews, K. A., Schulz, R., & Zdzienicka, B. (2006). The life engagement test: Assessing purpose in life. *Journal of Behavioral Medicine*, 29, 291–298. <https://doi.org/10.1007/s10865-005-9044-1>
- Schulenberg, S. E., Strack, K. M., & Buchanan, E. M. (2011). The Meaning in Life Questionnaire: Psychometric properties with individuals with serious mental illness in an inpatient setting. *Journal of Clinical Psychology*, 67(12), 1210–1219. <https://doi.org/10.1002/jclp.20841>
- Schutte, L., Wissing, M. P., Ellis, S. M., Jose, P. E., & Vella-Brodrick, D. A. (2016). Rasch analysis of the meaning in life questionnaire among adults from South Africa, Australia, and New Zealand. *Health and Quality of Life Outcomes*, 14, 1–15. <https://doi.org/10.1186/s12955-016-0414-x>
- Steger, M. F. (2017). Meaning in life and wellbeing. *Wellbeing, Recovery and Mental Health*, 1, 75–85. <https://doi.org/10.1017/9781316339275.008>
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, 53(1), 80. <https://doi.org/10.1037/0022-0167.53.1.80>
- Steger, M. F., Hicks, B. M., Krueger, R. F., & Bouchard, T. J. (2011). Genetic and environmental influences and covariance among meaning in life, religiousness, and spirituality. *The Journal of Positive Psychology*, 6(3), 181–191. <https://doi.org/10.1080/17439760.2011.569172>
- Steger, M. F., Kawabata, Y., Shimai, S., & Otake, K. (2008). The meaningful life in Japan and the United States: Levels and correlates of meaning in life. *Journal of Research in Personality*, 42(3), 660–678. <https://doi.org/10.1016/j.jrp.2007.09.003>
- Sumintono, B., & Widhiarso, W. (2015). *Aplikasi Model Rasch untuk Penelitian Ilmu-ilmu Sosial*. Trim Komunikata.
- Tennant, A., Horton, M., & Pallant, J. F. (2011). *Introductory rasch analysis: a workbook*. Leeds, UK: Department of Rehabilitation Medicine, University of Leeds.
- Thompson, S. C., Sobolew-Shubin, A., Graham, M. A., & Janigian, A. S. (1989). Psychosocial adjustment following a stroke. *Social Science & Medicine*, 28(3), 239–247. [https://doi.org/10.1016/0277-9536\(89\)90267-0](https://doi.org/10.1016/0277-9536(89)90267-0)
- Travezaño-Cabrera, A., Vilca, L. W., Quiroz-Becerra, J., Huerta, S. L., Delgado-Vallejos, R., & Caycho-Rodríguez, T. (2022). Meaning of life questionnaire (MLQ) in peruvian undergraduate students: study of its psychometric properties from the perspective of

- classical test theory (CTT). *BMC Psychology*, 10(1). <https://doi.org/10.1186/s40359-022-00913-6>
- Van den Heuvel, M., Demerouti, E., Schreurs, B. H. J., Bakker, A. B., & Schaufeli, W. B. (2009). Does meaning-making help during organizational change? Development and validation of a new scale. *Career Development International*, 14(6), 508–533. <https://doi.org/10.1108/13620430910997277>
- Wang, M., & Dai, X. (2006). Chinese meaning in life questionnaire revised in college students and its reliability and validity test. *Chinese Journal of Clinical Psychology*.
- Waterman, A. S., Schwartz, S. J., Zamboanga, B. L., Ravert, R. D., Williams, M. K., Bede Agocha, V., Yeong Kim, S., & Brent Donnellan, M. (2010). The Questionnaire for Eudaimonic Well-Being: Psychometric properties, demographic comparisons, and evidence of validity. *The Journal of Positive Psychology*, 5(1), 41–61. <https://doi.org/10.1080/17439760903435208>
- Woessmann, L. (2016). The economic case for education. *Education Economics*, 24(1), 3–32. <https://doi.org/10.1080/09645292.2015.1059801>
- Wright, B. D., & Linacre, J. M. (1989). Observations are always ordinal; measurements, however, must be interval. *Archives of Physical Medicine and Rehabilitation*, 70(12), 857–860.

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Appendix 1. Meaning of Life Scale

Item Codes	Statements
M1	I am grateful for the blessings God has given me
M2	I am responsible for carrying out every task
M3	I am grateful to have loving parents
M4	I can learn lessons in life
M5	My life is meaningful if I am active in various ways activity
M6	I believe that in every difficulty there is ease
M7	I am a source of happiness for my parents
M8	I am sure I can live happily in the future
M9	I have friends who care
M10	I am enthusiastic about doing daily tasks
M11	Doing activities that I enjoy makes me passionate
M12	I feel happy when I help others
M13	I try to be steadfast in the trials given by God
M14	I never give up
M15	I enjoy gathering with family
M16	I feel afraid when I think about death
M17	I wish I had never been born