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ADAPTATION OF THE MEANING IN LIFE QUESTIONNAIRE IN LATVIAN

The aim of the present study was adapting the Meaning in Life Questionnaire (MLQ) in Latvian and testing its validity. The MLQ is a compact ten-item-long questionnaire operationally defining the construct of meaning in life as a search for meaning and the sense of its presence. The existential and positive psychology approaches emphasize the significance of these components of meaning in life for understanding effective functioning. The original MLQ was translated to Latvian and then back to English. After a comparison of texts, psychometric properties of the improved Latvian version were tested. Participants of the study were 406 people, ranged in age from 18 to 49 (66% females). University students formed the most part of the participants (88%). The Satisfaction with Life Scale and the Individual Future Orientation Scale were applied for testing the convergent validity of the MLQ. The results of the exploratory and confirmatory factor analyses supported the two-factor structure of the Latvian version of the MLQ and an acceptable fit of the model to data. Both scales also demonstrated good internal consistency. An absence of a significant relationship between the presence of meaning and search for it forms a topic for deeper qualitative and quantitative investigations. As expected, the presence of meaning in life associated positively with satisfaction with life and future orientation. The search for meaning linked positively to future orientation and not associated with life satisfaction. The presence of meaning in life and satisfaction with life demonstrated weak positive correlations with age. However, the linearity of this relationship should be tested in older adults. The search for meaning was not related to age. There were no significant gender differences in the presence or search for meaning in life. As a result of adaptation, the Latvian version of the MLQ can be applied in studies on meaning in life, views of the future, and different aspects of well-being.

Key words: meaning in life, Meaning in Life Questionnaire, adaptation, Latvian version.

Адаптация «Опросника смысла жизни» на латышский язык

Целью данного исследования была адаптация «Опросника смысла жизни» *(MLQ)* на латышский язык и проверка его валидности. Это компактный опросник из десяти пунктов, который операционно определяет понятие смысла жизни как поиск смысла и его наличие. Экзистенциальный подход и позитивная психология подчеркивают значение этих компонентов смысла жизни для понимания эффективного функционирования индивида. Оригинал *MLQ* был переведен на латышский язык, а затем – обратно на английский. После сравнения текстов были проверены психометрические свойства улучшенной латышской версии. Участниками исследования стали 406 человек в возрасте от 18 до 49 лет (66% из них были женщины). Студенты университета составляли б**о**льшую часть участников (88%). «Шкала удовлетворенности жизнью» и «Шкала индивидуальной ориентации на будущее» были применены для проверки конвергентной валидности *MLQ*. Результаты поискового и подтверждающего факторного анализа подтвердили двухфакторную структуру латвийской версии *MLQ* и приемлемый уровень соответствия модели полученным данным. Обе шкалы продемонстрировали также хорошую внутреннюю согласованность. Отсутствие существенной связи между наличием смысла и его поиском является темой для более глубокого качественного и количественного исследования. Как и ожидалось, наличие смысла в жизни было положительно связано с удовлетворенностью

жизнью и ориентацией на будущее. Поиск смысла был положительно связан с ориентацией на будущее и не связан с удовлетворенностью жизнью. Наличие смысла в жизни и удовлетворенность жизнью продемонстрировали слабую положительную взаимосвязь с возрастом. Тем не менее, линейность этого отношения должна быть проверена на выборке пожилых людей. Поиск смысла не был связан с возрастом. Не было также и существенных гендерных различий в наличии или поиске смысла жизни. В результате адаптации латышская версия *MLQ* может быть применена в исследованиях смысла жизни, взглядов на будущее и различных аспектов благополучия.

Ключевые слова: смысл жизни, «Опросник смысла жизни», адаптация, латышская версия.

Introduction

A broad humanistic perspective (Buhler 1971) and existential and positive approaches (Frankl 1963; Ryff, Keyes 1995) emphasized meaning in life among the central concepts in understanding healthy psychological functioning. Empirical findings demonstrated that meaningful life contributes to subjective well-being, positive health outcomes, and coping with stressful life events (Hoet al. 2010; Park J., Baumeister 2017; Park C.L., George 2013; Vella-Brodrick et al. 2009). The Meaning in Life Questionnaire (MLQ, Steger et al. 2006) represented the construct of meaning in life as having two dimensions – the presence of meaning and search for it. This model described different modalities of individual pursuit for meaning and raised researchers' interest, resulted in adapting the MLQ in more than 30 languages. Applications of the MLQ revealed cross-cultural differences in the relationship between the search and the presence of meaning in life (Chan 2017; Steger et al. 2008). Increased topicality of meaning in life in empirical studies in Latvia (e.g., Dombrovskis 2017; Levina et al. 2018) and usefulness of MLQ in the assessment of this psychological construct (Steger et al. 2006; Steger et al. 2008; Steger, Kashdan 2007) resulted in setting the aim of the present study – adapting the MLQ in Latvian and testing its construct validity.

Steger et al. (2006, p. 81) defined meaning in life as "the sense made of, and significance felt regarding, the nature of one's being and existence". This definition integrates experienced significance of life (Crumbaugh, Maholick 1964) and generalized reflections on individual existence (e.g., Baumeister 1991). Simultaneously, the MLQ improved the measurement of meaning in life in two ways. First, the questionnaire involved the search for meaning (Frankl 1963), added to the general reflection on the presence of it. Second, items were critically assessed to avoid imposed correlations with expected consequences of the presence of or the search for meaning in life. For example, authors of the MLQ excluded items addressing life satisfaction or thoughts regarding suicide.

The developed questionnaire demonstrated high reliability of scales and stability of its factorial structure in a series of studies in the United States (Steger et al. 2006; Steger, Kashdan 2007; Steger et al. 2009). Following adaptations revealed good or acceptable fit of the MLQ in different cultural settings (e.g., Chan 2017; Damasio et al. 2016; Pezirkianidis et al. 2016; Singh et al. 2016; Steger et al. 2008). Steger et al. (2008) also demonstrated that culture moderates the relationship between the search

for meaning and its presence. The negative relationship among Americans changed to a positive relationship among Japanese (Steger et al. 2008). The application of the model also extended further theoretical perspectives for the development of the conception of meaning in life (Martela, Steger 2016).

Validation of the MLQ involved testing the connection between meaning in life and satisfaction with it constituting a consequence of meaningful life (e.g., Steger, Kashdan 2007). Studies (Chan 2017; Pezirkianidis et al. 2016; Steger, Kashdan 2007; Steger et al. 2009) confirmed a positive correlation between the presence of meaning and satisfaction with life, ranged from .46 to .61. This connection was topical for younger and older adults (Steger et al. 2009). In addition, older adults demonstrated some increase in the presence of meaning while younger adults were higher in their search for meaning in life (Park N. et al. 2010; Steger et al. 2009). The relationship between the search for meaning and satisfaction with life was negative ranging from -.26 to -.46 (Park N. et al. 2010; Steger et al. 2009).

This study suggested an additional option for testing the validity of the MLQ. The positive link between the purpose in life and its meaning (Baumeister 1991; Steger et al. 2006) let to assume that meaning in life associates with individual future orientation, defined as engagement in prospective thinking and outcome-relevant behavior (Seginer 2009). Motivational, cognitive, and behavioral components of future orientation (Seginer et al. 2004) involve particular goals and desired states, considered as kinds of life purpose (Baumeister, Wilson 1996). An empirical qualitative study (Kolesovs et al. 2018) also revealed the connection between a construal of the goal or purpose in life and its meaning. Therefore, a positive relationship between individual future orientation and presence of meaning was expected. At the same time, the behavioral component of future orientation includes exploration of goals and opportunities (Seginer et al. 2004), which can associate with a search for purpose and meaning in life. These two assumptions were tested in the study.

Method

Participants. Participants of the study were 406 people ranged in age from 18 to 49 (M = 23.20, SD = 5.83). Sixty-six percent of them were females. The snowball convenience sample involved students from different universities and their friends. As a result, students constituted the most part of the participants (88%). About 27% of participants were graduated, and 50% percent were employed. Only 10% have been married, and 16% have had children.

Materials. The Meaning in Life Questionnaire (MLQ, Steger et al. 2006) was adapted in Latvian within the present study (1). The back translation procedure had aimed at maximal congruence of the Latvian version of the MLQ with its original. Two independent translators performed the translation with the following comparison of two texts in English and improvement of the translated version.

The questionnaire contains ten items organized in two subscales – Presence (five items) and Search (five items). Participants respond to each item on a seven-point Likert-type scale from 1 ('absolutely untrue') to 7 ('absolutely true'). Items 1, 4, 5, 6,

and reversed Item 9 form the Presence subscale. These items represent the degree to which participants feel the presence of meaning in their lives. An item example: "I have a good sense of what makes my life meaningful". Items 2, 3, 7, 8, and 10 form the Search subscale, which examines the extent of searching for meaning in life. An item example "I am looking for something that makes my life feel meaningful". Higher scores on Presence or Search subscales indicate a higher level of presence or search for meaning in life, respectively.

In a series of studies (Steger et al. 2006), fit indexes for two factors of the original MLQ indicated good or acceptable model fit: GFI, CFI, NFI, and TLI varied from 0.91 to 0.99; RMSEA values were from 0.04 to 0.09. Both scales demonstrated high reliability. Internal consistency of the Presence scale and Search scale varied from .82 to .86 and .86 to .87, respectively. One-month test-retest stability coefficients were .70 (the Presence scale) and .73 (the Search scale). Steger and Kashdan (2007) also confirmed that the search and presence of meaning in life and satisfaction with it demonstrate a similar level of stability over a one-year interval. Pearson correlation coefficients were .41 for the presence of meaning, .50 for its search, and .40 for satisfaction with life.

The Satisfaction with Life Scale (SWLS, Diener et al. 1985) was applied for the assessment of life satisfaction. The scale consists of five items assessed on a seven-point Likert-type scale. An item example: "The conditions of my life are excellent." A Latvian version of the scale was applied (Upmane 2010). Cronbach's alpha coefficient was .83 for this scale.

The Individual Future Orientation Scale (IFOS, Kolesovs 2017) assessed the general future orientation, based on its motivational, cognitive, and behavioral components (Seginer et al. 2004). This scale involves multiple domains of life and provides a more generalized view of individual future orientation if compared with a very detailed single-domain approach (Seginer et al. 2004) and, simultaneously, a more detailed view if compared with a highly generalized assessment of future orientation (Zimbardo, Boyd 1999). A seven-point Likert-type scale was suggested for answers. The scale was developed and applied in Latvian.

Motivational subscale contains six questions regarding perceived control over goals, an expectancy of their fulfillment, and perceived value. Each aspect of motivation was assessed for near and distant goals. For example, the question "How important are these goals for you?" represented the perceived value of goals. Cronbach's alpha for this subscale was .70. Test-retest reliability for the motivational subscale within a four-week interval was .73.

Cognitive subscale evaluated the content of future goals by two questions: "To what extent you associate near [next question – distant] goals with the following domains?" Nine specific domains were assessed for near and distant goals (18 items): education, occupation and career, family and marriage, children, friends, parents and relatives, leisure, property and money, and personal growth. Cronbach's alpha for the cognitive subscale was .83. Test-retest reliability for this subscale was .85.

Behavioral subscale assesses individual commitment to goals and exploration of opportunities for their fulfillment. These aspects are evaluated by six questions regarding

definitiveness of near or distant goals, efforts in their specification, and exploration of opportunities for their fulfillment. For example, the question "Do you have defined your personal goals?" represented the commitment to goals. Cronbach's alpha for this subscale was .81. Test-retest reliability for the behavioral subscale was .72.

The general future orientation can be calculated as a result of summing values of three scales – motivational, cognitive, and behavioral. The sum should be divided by three. The internal consistency of the summary scale was .86, and test-retest reliability within a four-week interval was .81.

Procedure. Participation in the study was voluntary and anonymous. After the informed consent was received, students filled in the inventory. The MLQ was administered in a paper-and-pencil format without a time limit. IBM SPSS Statistics for Windows 22.0 and 'lavaan' (0.5–23) for R (Rosseel 2012) were applied for computations.

Results

The data were analyzed in three steps: the exploratory factor analysis (EFA), the confirmatory factor analysis (CFA), and convergent validity analysis. The latter included testing the relationship of both aspects of meaning in life with life satisfaction and future orientation.

An EFA was performed through principal axis extraction with varimax rotation on ten items for a subsample of 200 participants. The Kaiser-Meyer-Olkin measure was .83 that demonstrated a good level of sampling adequacy. Bartlett's test of sphericity confirmed that data were suitable for the factor analysis, χ^2 (45) = 1140.73, $p < .001$. The EFA revealed two factors explaining 62.6% of the variance. Table 1 presents factor loadings, explained variance, reliability coefficients, and descriptive statistics for both factors.

Table 1

Exploratory factor analysis on items of the Latvian MLQ via principal axis factoring with varimax rotation, n = 200

	Item (in Latvian)	Factor 1	Factor 2
1.	*Es saprotu savas dzives nozimi.*	**.70**	-.02
2.	*Es mekleju kaut ko, kas padaritu manu dzivi jegpilnu.*	-.09	**.80**
3.	*Es allaz censos atrast savas dzives merki.*	.08	**.88**
4.	*Man ir skaidra dzives merka izjuta.*	**.84**	.06
5.	*Man ir skaidra izjuta, kas tiesi padara manu dzivi jegpilnu.*	**.79**	-.01
6.	*Es esmu atklajis(-usi) apmierinosu dzives merki.*	**.83**	.06
7.	*Es vienmer mekleju to, kas lautu sajust manas dzives nozimigumu.*	.22	**.76**
8.	*Es mekleju dzives merki vai misiju.*	-.03	**.76**
9.	*Manai dzivei nav skaidra merka.*	**-.73**	.12
10.	*Es sava dzive mekleju jegu.*	**-.40**	**.65**

Sequel to Table 1 see on the next page

Sequel to Table 1

Characteristic	Factor 1	Factor 2
Eigenvalue	3.26	3.00
Explained Variance, %	32.6	30.0
Number of Items	5	5
Cronbach's Alpha	.88	.87
M (SD)	4.79 (1.40)	4.67 (1.44)

Notes: Factor loadings over .30 are shown in bold. Item 10 was included in calculation of the sum in Factor 2 only.

Source: elaborated by the author.

Factor 1 included items of the Presence subscale. Factor 2 demonstrated higher factorial loadings on items of the Search subscale. Item 10 demonstrated positive factor loading on Factor 2 and negative cross-loading on Factor 1. However, the correlation between both factors was not significant, $r(198) = -.08$, $p = .267$. Therefore, Item 10 was included in sums of Factor 2 only, as considered by the original MLQ (Steger et al. 2006).

The CFA tested the two-factor model of the original MLQ with Satorra-Bentler correction (Satorra, Bentler 1994) in a subsample of 206 participants. Scaling correction value was 1.30. The analysis revealed acceptable fit of the model to data: $\chi^2(34) = 90.67$, $p < .001$, AGFI = 0.98, CFI = 0.92, TLI = 0.89, RMSEA = 0.09 (90% CI from 0.07 to 0.11, $p = .001$), SRMR = 0.10. In accordance with L. Hu and P.M. Bentler (1999), general and comparative fit indexes were close to or higher than 0.90, while baseline close-fit indexes were not higher than 0.10. Figure 1 presents the results of the CFA for a two-factor model.

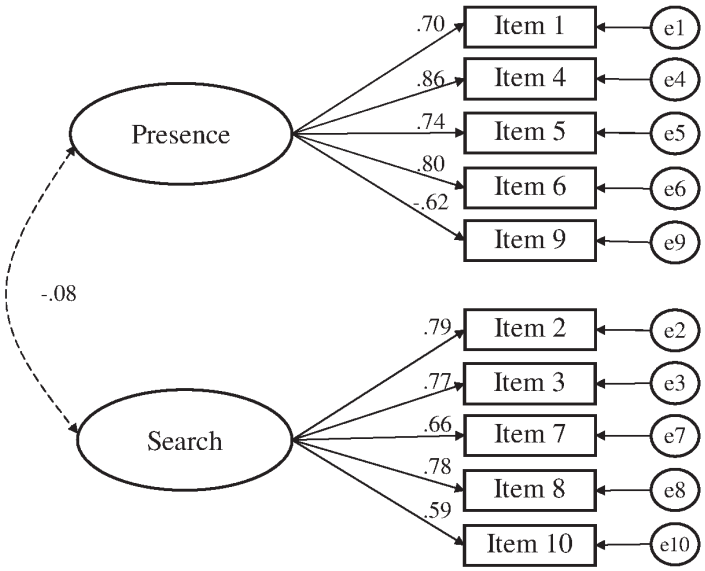
The one-factor model (ten items as generalized meaning) demonstrated a low level of fit to data: $\chi^2(35) = 451.08$, $p < .001$, AGFI = 0.87, CFI = 0.41, TLI = 0.24, RMSEA = 0.24 (90% CI from 0.22 to 0.26, $p < .001$), SRMR = 0.24. A comparison of non-corrected parameters of two nested models confirmed that the two-factor model is significantly better, $\Delta\chi^2(1) = 446.30$, $p < .001$, ΔCFI = 0.49.

The model was construct-level metric invariant (Cheung, Rensvold 2002) in comparison with the configural model for gender, $\Delta\chi^2 (8) = 8.52$, $p = .384$. Therefore, factorial loadings were similar in females and males. The comparisons also revealed no significant gender differences in the presence of meaning, $t (404) = 1.41$, $p = .159$, search of it, $t (404) = 0.96$, $p = .336$, life satisfaction, $t (304) = 1.22$, $p = .223$, and future orientation, $t (318) = 1.02$, $p = .310$.

Convergent validity was tested in the whole sample of participants. The following correlation analysis assessed the relationships between the variables (Table 2).

Figure 1

Confirmatory factor analysis on the Latvian MLQ, n = 206



Note: dashed line indicates non-significant covariance.

Source: elaborated by the author.

Table 2

Pearson correlations between the Latvian MLQ, satisfaction with life, future orientation, and age, n = 406

Variable	MLQ-P	MLQ-S	SWL	FO	Age
1. Presence of meaning in life (MLQ-P)	–				
2. Search for meaning in life (MLQ-S)	-.10	–			
3. Satisfaction with life[a] (SWL)	.47***	- .10	–		
4. Future orientation[b] (FO)	.50***	.17**	.37***	–	
5. Age	.21***	.07	.16**	.13*	–

Note: [a]n = 306. [b]n = 320.

Source: elaborated by the author.

As expected, the presence of meaning correlated positively with life satisfaction. There was no significant correlation between the search for meaning and life satisfaction. At the same time, meaning in life and satisfaction with it demonstrated a weak positive correlation with age while the search for meaning was not related to age. Future orientation correlated positively with the presence of meaning and (at a lower degree) with the search for it. Future orientation also correlated positively with life satisfaction and age.

Discussion

The results of EFA and CFA confirmed the factorial structure of the MLQ (Steger et al. 2006). In the Latvian sample, two factors presented the search for meaning in life and its presence. The non-modified model demonstrated acceptable fit to data. In addition, the internal consistency of the Latvian version of the MLQ was high. Cronbach's alpha coefficients of .87 and .88 were in accordance with those of the original questionnaire (Steger et al. 2006).

An absence of significant correlation between two factors demonstrated their relative independence. Therefore, the results reveal the middle way to conceptualizing this relationship. It contrasts with the negative relationship in the American sample and the positive one in the Japanese sample (Steger et al. 2008) and confirms the mediation of the relationship by cultural settings.

The positive relationship of the presence of meaning in life with life satisfaction concurs with previous studies (Chan 2017; Pezirkianidis et al. 2016; Steger, Kashdan 2007; Steger et al. 2009) and confirms theoretical views on their association (e.g., Steger, Kashdan 2007). An absence of the relationship between the search for meaning and life satisfaction indicates that existential exploratory activities have no substantial effect on life satisfaction in this specific group and context.

Expected positive relationship between future orientation and the presence of meaning in life confirmed that the generalized indicator of individual motivation, views of goals in different domains, and the involvement in goal pursuit (Kolesovs 2017) can associate with the purpose in life (Baumeister, Wilson 1996) contributing to its meaningfulness (Baumeister 1991; Steger et al. 2006). Therefore, meaning in life is positively associated with domains of personal goals. The aim of a further study is establishing a connection between this level of goals and a higher level of purpose in life, reflected the main personal goals, in their association with meaning in life.

The results also confirmed a positive connection between future orientation and the search for meaning. It concurs with the view of future orientation as involving exploration of goals and opportunities for their achievement (Seginer et al. 2004). However, the closeness of this connection is quite low. Therefore, the connection between the search for the purpose and the search for meaning in life should be explored in greater detail.

Focused on adapting the MLQ in Latvian, this study has visible limitations. The most part of the participants was university students. Therefore, a generalization of the results is more valid for the part of the population, accepted this developmental challenge. The sample also underrepresented older and married adults. Correlation between the presence of meaning and age was in accordance with the previous studies (Park N. et al. 2010; Steger et al. 2009). At the same time, an additional study is needed for the assessment of linearity of this relationship in older adults in Latvia.

Broader testing of convergent validity of the MLQ was limited by a set of selected questionnaires. At the same time, further validation procedures should take into account critical suggestions regarding the content of measures assessing meaning in

life (e.g., Steger et al. 2006). Establishing stability of the Latvian MLQ asks for an additional study involving a test-retest procedure.

Positive relationships among future orientation, meaning in life, and satisfaction with it open another topic for further studies. A mediational role of meaning in life should be tested for the relationship between personal goals, associated with purposeful life, and positive outcomes of the meaningful life involving satisfaction with it. Life-span dynamics of the variables and their relationships form a topic for a longitudinal study.

Conclusions

The results of adaptation of the MLQ in Latvian concur with a set of studies, adapting the questionnaire worldwide. It can be concluded that:

- the Latvian version of the MLQ demonstrates the structure, reliability, and convergent validity close to the original;
- the presence of meaning in life and search of it constitute two aspects of meaning, which can be investigated in their relationships with individual views of the future, the sense of purposeful life, and different aspects of healthy functioning and well-being;
- the relationship between life satisfaction and the presence of meaning was positive;
- the study also confirmed a positive relationship between future orientation and the presence of meaning. The association of future orientation with the search for meaning was relatively weak;
- dynamics of meaning in life is a question for further studies.

Note:

(1) Translations of the Meaning in Life Questionnaire

English (Steger et al. 2006)	Latvian	English (back translated)
1	2	3
1. I understand my life's meaning. [P]	1. *Es saprotu savas dzives nozimi.*	1. I understand the meaning of my life.
2. I am looking for something that makes my life feel meaningful. [S]	2. *Es mekleju kaut ko, kas padaritu manu dzivi jegpilnu.*	2. I am looking for something that makes my life meaningful.
3. I am always looking to find my life's purpose. [S]	3. *Es allaz censos atrast savas dzives merki.*	3. I am always looking to find my life's purpose.
4. My life has a clear sense of purpose. [P]	4. *Man ir skaidra dzives merka izjuta.*	4. I have a clear sense of life's purpose.
5. I have a good sense of what makes my life meaningful. [P]	5. *Man ir skaidra izjuta, kas tiesi padara manu dzivi jegpilnu.*	5. I have a clear sense of what makes my life meaningful.
6. I have discovered a satisfying life purpose. [P]	6. *Es esmu atklajis(-usi) apmierinosu dzives merki.*	6. I have revealed a satisfying purpose of life.

Sequel to Table see on the next page

Sequel to Table 1

1	2	3
7. I am always searching for something that makes my life feel significant. [S]	7. *Es vienmer mekleju to, kas lautu sajust manas dzives nozimigumu.*	7. I am always looking for something that would make me feel significance of my life.
8. I am seeking a purpose or mission for my life. [S]	8. *Es mekleju dzives merki vai misiju.*	8. I am looking for a purpose or mission for my life.
9. My life has no clear purpose. [P, reversed]	9. *Manai dzivei nav skaidra merka.*	9. My life has no clear purpose.
10. I am searching for meaning in my life. [S]	10. *Es sava dzive mekleju jegu.*	10. I am searching for meaning in my life.

Notes: P – Presence of meaning in life. S – Search for meaning in life.

References

Baumeister R.F. (1991) *Meanings of Life*. New York: Guilford Press.

Baumeister R.F., Wilson B. (1996) Life stories and the four need for meaning. *Psychological Inquiry,* Vol. 7, No. 4, pp. 322–325.

Buhler C. (1971) Basic theoretical concepts of humanistic psychology.*American Psychologist*, Vol. 26, No. 4, pp. 378–386.

Chan W.C.H. (2017) Assessing meaning in life in social work practice: validation of the Meaning in Life Questionnaire among clinical samples. *British Journal of Social Work*, Vol. 47, No. 1, pp. 9–27.

Cheung G.W., Rensvold R.B. (2002) Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling*, Vol. 9, No. 2, pp. 233–255.

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,* Vol. 20, No. 2, pp. 200–207.

Damasio B.F., Filho N.H., Koller S.H. (2016) Measuring meaning in life: An empirical comparison of two well-known measures. *Journal of Happiness Studies,* Vol. 17, No. 1, pp. 431–445.

Diener E., Emmons R.A., Larsen R.J., Griffin S. (1985) The satisfaction with life scale. *Journal of Personality Assessment,* Vol. 49, No. 1, pp. 71–75.

Dombrovskis V. (2017) A model for individual's meaning of life. *Social Sciences Bulletin*, Vol. 25, No. 2, pp. 87–102.

Frankl V.E. (1963) *Man's Search for Meaning: An Introduction to Logo Therapy*. New York: Washington Square Press.

Ho M.Y., Cheung F.M., Cheung S.F. (2010) The role of meaning in life and optimism in promoting well-being. *Personality and Individual Differences,* Vol. 48, No. 5, pp. 658–663.

Hu L., Bentler P.M. (1999) Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, Vol. 6, No. 1, pp. 1–55.

Kolesovs A. (2017) Individual future orientation and demographic factors predicting life satisfaction. In: Lubkina V., Zvaigzne A. (Eds.). *Society. Integration. Education. Proceedings*

of the International Scientific Conference. Rezekne: Rezekne Academy of Technologies, Vol. 1, pp. 534–543.

Kolesovs A., Salima I., Maskovs A. (2018) Formulations of the main goal in life: a qualitative content analysis. In: Lubkina V., Sneidere K., Usca S., Zvaigzne A. (Eds.). *Society. Integration. Education. Proceedings of the International Scientific Conference*. Rezekne: Rezekne Academy of Technologies, Vol. 7, pp. 104–114.

Levina J., Martinsone K., Mihailova S., Sokola-Nazarenko M. (2018) Students' social activities, values, meaningfulness of life and self-confidence. In: Lubkina V., Sneidere K., Usca S., Zvaigzne A. (Eds.). *Society. Integration. Education. Proceedings of the International Scientific Conference*. Rezekne: Rezekne Academy of Technologies, Vol. 7, pp. 115–128.

Martela F., Steger M.F. (2016) The three meanings of meaning in life: distinguishing coherence, purpose, and significance. *The Journal of Positive Psychology*, Vol. 11, No. 5, pp. 531–545.

Park C.L., George L.S. (2013) Assessing meaning and meaning making in the context of stressful life events: measurement tools and approaches. *The Journal of Positive Psychology*, Vol. 8, No. 6, pp. 483–504.

Park J., Baumeister R.F. (2017) Meaning in life and adjustment to daily stressors. *The Journal of Positive Psychology*, Vol. 12, No. 4, pp. 333–341.

Park N., Park M., Peterson C. (2010) When is the search for meaning related to life satisfaction? *Applied Psychology: Health and Well-Being*, Vol. 2, No. 1, pp. 1–13.

Pezirkianidis C., Galanakis M., Karakasidou I., Stalikas A. (2016) Validation of the Meaning in Life Questionnaire (MLQ) in a Greek sample. *Psychology*, Vol. 7, No. 13, pp. 1518–1530.

Rosseel Y. (2012) lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, Vol. 48, No. 2, pp. 1–36.

Ryff C.D., Keyes C.L. (1995) The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, Vol. 69, No. 4, pp. 719–727.

Satorra A., Bentler P.M. (1994) Corrections to test statistics and standard errors in covariance structure analysis. In: Von Eye A., Clogg C.C. (Eds.). *Latent Variables Analysis: Applications for Developmental Research*. Thousand Oaks, CA: Sage, pp. 399–419.

Seginer R. (2009) *Future Orientation: Developmental and Ecological Perspectives*. New York, NY: Springer.

Seginer R., Vermulst A., Shoyer S. (2004) The indirect link between perceived parenting and adolescent future orientation: a multiple-step model. *International Journal of Behavioral Development,* Vol. 28, No. 4, pp. 365–378.

Singh K., Junnarkar M., Jaswal S., Kaur J. (2016) Validation of Meaning in Life Questionnaire in Hindi (MLQ-H). *Mental Health, Religion & Culture*, Vol. 19, No. 5, pp. 448–458.

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*, Vol. 53, No. 1, pp. 80–93.

Steger M.F., Kashdan T.B. (2007) Stability and specificity of meaning in life and life satisfaction over one year. *Journal of Happiness Studies*, Vol. 8, No. 2, pp. 161–179.

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*, Vol. 42, No. 3, pp. 660–678.

Steger M.F., Oishi S., Kashdan T.B. (2009) Meaning in life across the life span: levels and correlates of meaning in life from emerging adulthood to older adulthood. *The Journal of Positive Psychology*, Vol. 4, No. 1, pp. 43–52.

Upmane A. (2010) *Apmierinatibu ar dzivi prognozejosie faktori: kvantitativa un kvalitativa analize*. Promocijas darbs. Riga: Latvijas Universitate. (In Latvian)

Vella-Brodrick D.A., Park N., Peterson C. (2009) Three ways to be happy: pleasure, engagement, and meaning-findings from Australian and US samples. *Social Indicators Research*, Vol. 90, No. 2, pp. 165–179.

Zimbardo P.G., Boyd J.N. (1999) Putting time in perspective: a valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, Vol. 77, No. 6, pp. 1271–1288.