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How to cite this publication

Please cite the final published version:

Ozer, S., & Bertelsen, P. (2020). Developing and Validating a Short Scale Assessing Generic Life Skills. *Psychological Studies*, 65(3), 327-335. <https://doi.org/10.1007/s12646-020-00560-0>

Publication metadata

Title: Developing and Validating a Short Scale Assessing Generic Life Skills
Author(s): Simon Ozer & Preben Bertelsen
Journal: Psychological Studies
DOI/Link: <https://doi.org/10.1007/s12646-020-00560-0>
Document version: Accepted manuscript (post-print)

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Developing and Validating a Short Scale Assessing Generic Life Skills

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Abstract

Life psychology is an integrative framework theory centered on how individuals employ their generic life skills in handling everyday life tasks and reaching life goals. Indeed, the theory relates to the accelerating complexity of contemporary globalized societies and how we need generic life skills in order to successfully navigate through a fluid and dynamic context. Within the theory of life psychology, ten life skills have been identified and these are categorized into 1) participation in life, 2) realistic attunement, and 3) perspective taking. The present paper describes the development and validation of a new measure tapping into these three categories as well as an overall aggregated dimension of life skills. Our analyses indicate that the scale holds a solid factor structure.

Furthermore, convergent validity was established through the related concepts of self-determination and self-efficacy, and predictive validity was examined in relation to life satisfaction. Our scale holds great implications in regard to developing the empirical foundation for research in the field of life psychology.

Keywords: Life psychology, life skills, measurement, scale, validation

Developing and Validating a Short Scale Assessing Generic Life Skills

Life psychology (Bertelsen, 2013) is an integrative framework theory centered on the assumption that generic life skills are necessary to handle general everyday life tasks in order to reach a good enough life. Life skills in general refer to psychosocial competencies and interpersonal skills that shape our actions and interaction with others and society (Erawan, 2010). Consequently, the conception of life skills emerges as pivotal in relation to adequately negotiating and addressing life challenges and is generically relevant for all humans across gender, cultural, and age differences. One's life skills must be developed in order to establish, maintain, and develop one's own and common life, making the concept of life skills central to interventions based on the life psychological theory.

The application of life psychology concerns interventions for advancing the individual's life skills to match the requirements of the life tasks immediate to the individual (Bertelsen, 2018). The theory of life psychology thus holds important implications for a diverse field of applications across psychology as well as cognate disciplines. With the accelerating complexity of contemporary globalized societies, life skills are needed to handle both the tasks of everyday life and the tasks associated with less clear sociocultural structures. That is, in recent years cultural globalization has challenged the cultural homogeneity and traditions in specific contexts (Ozer, 2019). In addition, technological and social development has enhanced individualism in many societies suggesting that the individual must navigate several sociocultural contexts and relations without strong support from previously established traditions (Bauman, 2000; Beck, 1992). In consequence, the theory of life psychology and life skills is applicable to understand and address multiple contemporary challenges in dissimilar societies around the world. Recently, the theory of life psychology has been applied within educational psychology (Skibsted & Bertelsen, 2016) and in relation to social psychiatry (Bertelsen, 2013) and anti-radicalization interventions (Bertelsen, 2018; McNeil-Wilson,

2017). Concordant with the application of life psychology, this framework theory must develop as an empirically founded theory and applicable measurement is thus needed.

The previously developed 40-items Life Skills Scale (LSS; Ozer & Bertelsen, 2019) is founded on the distinction between agency and structure, reflecting the intentional dimension of individual directedness *toward* the world as well as being directed *by* the external structures of the world. Such measurement does not, however, capture the original three dimensions of human life skills associated with participation, realistic attunement, and perspective taking in life (Bertelsen, 2013). These three dimensions form the central categorization of life skills and they are appropriate to examine specifically since they indicate more integral aspects of one's life skills that could be developed in regard to a certain domain of intervention and application. The aim of the present paper is to develop and adequately validate a short 20-item version of a life skills measure that appears fundamental for future life psychological research and interventions.

Life Psychology

The framework theory of life psychology (Bertelsen, 2013) addresses the generic psychological mechanisms and processes of everyday life. That is, every human across the globe deals with everyday life tasks, which are comprehended and managed by our life skills in relation to the projects we engage with throughout life (Little, 2015). Such tasks include maintaining good relationships with our family and friends, organizing our everyday routines, and getting involved with organizations or institutions that shape our society and social constitution. Indeed, such tasks are numerous, and they differ across sociocultural contexts. Yet, there is a generic level of these tasks; for example, the maintenance of close relationships with other humans exists as a life task across a diverse humanity. Overall, the theory of life psychology examines how individuals are

shaped by and oriented toward the context in regard to establishing, maintaining, and developing one's own and common life (Bertelsen, 2013). Central to this theoretical aim is the conception of life skills as a means of managing everyday life in an appropriate and satisfactory manner with an orientation toward realization of one's life projects.

Conceptualizing Life Skills

The concept of life skills intersects with related descriptions in the existing literature. Ryan and Deci (2000) have described life skills as the ability to effectively interact with the environment. This resonates with the understanding presented by UNICEF (2003) explaining how life skills enable people to make informed decisions, communicate effectively, and develop coping and self-regulation that help them through life. Accordingly, WHO's (1999) conception of life skills stresses how they enable people to handle everyday challenges. Within the theory of life psychology, life skills are defined as generic sets of psychological capabilities used to transform general human life tasks and life challenges into comprehensible, personally sensible, and commonly meaningful and manageable goals of change (Bertelsen, 2013, 2018). In research, life skills have previously been associated with well-being (Seligman, 2002; Kahneman & Krueger, 2006), self-efficacy (Banduara, 2013), and goal setting (Sun & Frese, 2013).

Within life psychology, ten life skills have been identified: (1) the relational skill concerning close social relationships; (2) the framework skill regarding the basic material framework and activities constituting one's life; (3) the community skill about making a difference when it comes to the greater good; (4) the attentiveness skill about being present and being focused on, as well as absorbed and engaged in something; (5) the planning skill about creating an overview of what needs to be done to find the most efficient way to reach that goal; (6) the norm-value skill about assessing whether what one is doing or what one is part of is in accordance with his or her personal norms and

values; (7) the awareness skill concerning the use of one's senses in relation to the perceptions coming from the surrounding world and sensations or affects in one's own body; (8) the contemplation skill about taking into perspective one's own thoughts, feelings, and motivation in a given situation, or a perspective on one's own and our common lives in general; (9) the empathy skill about taking into perspective other people's thoughts, feelings, and motivation in a given situation, or their perspective on their own and our common lives; and (10) the system skill about seeing the world and life from a system perspective (laws, regulations, institutions, and procedures, as well as scientific and cultural discourses). These life skills have in life psychology originally been grouped together in three overall categories and they have also been addressed in regard to dynamic interactions between the individual agency and the contextual structure (Bertelsen, 2013).

A central pattern reflecting the mutual constitution between the individual and his or her sociocultural context has been acknowledged in regard to intentionality (Bertelsen, 2012). Such contextual embeddedness is reflected in all ten life skills through the four aspects of “want,” “ability,” “external conditions,” and “being met,” and consequently reflected in two overall dimensions of *agency* and *structure*. When individuals engage with intentionality in their context, a central component driven by their life goals and projects is their wanting in life. Accordingly, the “want” aspect of life skills refers to the individual's desires, wishes, and strivings in life. Comprehending the individual's intentionality toward the world, the individual's wanting in life is strongly associated with the abilities that the individual possesses; that is, abilities are necessary to achieve the individual's desires and wishes, and at the same time the individual needs to want something for the abilities to be activated when achieving a goal or addressing a life task. Related to the intentionality of the individual toward the world is how the individual is directed by the world (Heidegger, 1967). In regard to life skills, the individual being shaped by the context is conceptualized through the external conditions that define the possibilities relevant to one's life

tasks and projects. Additionally, the way that the individual is being met in regard to, e.g., supporting relations and networks is important in regard to accomplishing one's goals and achieving an acceptable life. The dynamics of these aspects of both *agency* and *structure* are manifest in what the individual is doing. In other words, human behavior is guided by the intentionality of the individual in relation to how the individual is directed by the world (Bertelsen, 2013, 2018).

Life skills can be categorized differently according to one's theoretical approach. WHO (1999) identified five basic areas of life skills described as (1) decision-making and problem-solving, (2) creative thinking and critical thinking, (3) communication and interpersonal skills, (4) self-awareness and empathy, and (5) coping with emotions and coping with stress. Within the integrative theory of life psychology, life skills are applied to and evolve through the individual's contextually embedded interactions and the ten particular life skills can be further grouped into three superordinate categories of life skills. The three categories contain life skills pertaining to (a) participation, that is, taking a position from which one can participate in own and common life (including relation, framework, and community life skills); (b) realistic attunement, concerning realistic, pragmatic, and moral attunement to the natural, social, cultural, and societal surroundings (including attentiveness, planning, and norm-value life skills); and (c) perspective taking regarding navigation in life according to the diversity of personal, cultural, and societal perspectives on life (including awareness, contemplation, empathy, and system life skills). Such categorization is based on Bateson's (1979) hierarchical taxonomy of levels of connectivity, which is further relevant in relation to the complexity of late modern societies (Bauman, 2000; Beck, 1992). Indeed, this connectivity is rooted in cybernetics comprehending the interwoven nature of all phenomena and stressing the importance of feedback loops underlying such connectivity. Level one connectivity (participation) concerns an entity's immediate connectivity to challenges, possibilities, and

conditions of the surrounding world. Indeed, life skills at this level are about individual's responsive handling of the changes, developments, and challenges in the basic life tasks that they are facing. Level two connectivity (realistic attunement) is about emergent dynamic patterns based on such level one connectivity. That is, human life is punctuated into a personally reflected and personally chosen variety of differently directed interests and personal experience of meaning. Level three connectivity (perspective taking) is about emergent "patterns of patterns" of connectivity. In human life, this is about reflections on patterns of connectivity. At this level, people in a critical/innovative way relate to and (re-)organize the social, cultural, and societal systems they are part of and make critical reflections on the discourse by which such systems should be understood, explained, legitimized, and managed. At this level, life skills are not just about establishing personally meaningful connectivity but also about establishing connectivity, which is significant for our common life, i.e., common meaningful ways of establishing, sustaining, and developing common human life conditions and co-existence (Bertelsen, under review). Overall, this three-category distinction of life skills indicates active and reactive dynamics of connectivity reflecting the holism of the individual embedded in context. These three hierarchical ordered dimensions of life skills can be operationalized into ten general human skill-task units, as demonstrated in Table 1 and they emerge as central in regard to the individual's establishment, maintenance, and development of his or her own and common life.

Measuring Life Skills

The concept of life skills has been operationalized in previous research. Specifically, scales have been developed to assess and evaluate life skills among parents (Pettersson, Gravestijn, & Roest, 2016), children (Luckey & Nadelson, 2011), disadvantaged children (Kennedy, Pearson, Brett-Taylor, & Talreja, 2014), and high school students (Erawan, 2010). Our current scale

complements these measures providing a global and concise life skills scale that is theoretically rooted within the integrative theory of life psychology (Bertelsen, 2013).

The life psychological conception of life skills include many nuances and complexities reflected in the various distinctions and dimensions of life skills. A measure of life skills centered on the *agency vis-à-vis structure* dynamics has previously been established (Ozer & Bertelsen, 2019). This measure comprises four subscales reflecting the “want,” “ability,” “external possibilities,” and “being met” aspects, and these constitute the two overall dimensions of *agency* and *structure*. Such a measure is valuable in regard to examinations of how the individual’s orientations adhere to the support and possibilities of developing life skills. However, such a measure does not provide the possibility of investigating the diversity of the life skills. Consequently, a measure is needed to assess the three categories of life skills to provide this possibility to examine how life skills shape and contribute differently to various psychosocial phenomena.

Current Study

The aim of the present study was to contribute to the development of life psychology by establishing a short self-report scale tapping into the three life skills categories of participation, realistic attunement, and perspective taking. This measure was titled Life Skills Scale – Short (LSS-S) and the items were developed in accordance with the theory of life psychology (Bertelsen, 2013), relying on the results of the previous Life Skills Scale (LSS; Ozer & Bertelsen, 2019). That is, the original LSS was developed based on expert’s review of an original item pool to evaluate and clarify the conciseness and theoretical meaning of each item. In addition, the items were discussed in focus group interviews to secure that the items were tapping into the phenomena they were attempting to measure. The development of the LSS-S was based on this work and consequently, it

is important to assess whether the reliability and validity of the previous scale was kept in the new short version of the Life Skills Scale. Thus, the aim of the present study was guided by three primary objectives that were examined through two empirical studies that provided important steps in the validation procedure. That is, the two studies sought to (1) establish reliability and a solid factor structure through Confirmatory Factor Analysis (CFA); (2) establish convergent validity through association with related previously established measures; and (3) establish predictive validity of the short Life Skills Scale in regard to life satisfaction.

Study 1: Testing the Factor Structure and reliability

Methods

In order to establish the factor structure of Life Skills Scale – Short (LSS-S), we tested the measure through CFA. The analyses were conducted in Mplus 8, employing a robust maximum likelihood estimator (MLR). As suggested by Little (2015), we used the following guidelines for evaluating model fit: Comparative fit index (CFI) $\geq .95$, the root mean square error of approximation (RMSEA) $\leq .6$, and the standardized root mean square residual (SRMR) $\leq .6$.

Procedure and Participants

Data was collected through purposive non-random sampling using an online self-report questionnaire. Participants were recruited through Amazon Mechanical Turk (Buhrmester, Kwang, & Gosling, 2011). There were 228 participants in this sample; all were American college students ($M_{age} = 25.03$, $SD = 4.79$). Within this sample, 60.1% percent were male and 39.9% were female.

Measures

Besides questions regarding gender and age, participants answered the new Life Skills Scale – Short (LSS-S). The scale consists of 20 items with two items representing each of the ten life skills. The wording of the items was related to the previous Life Skills Scale (LSS), yet all items tapped into the reflections of what is typical for the participant to master concerning the ten life skills. Consequently, the measure taps into what characterizes the individual in regard to the life skills rather than the “want” and “ability” distinction of the *agency* aspect and the “external conditions” or the “being met” distinction of the *structure* aspect of the LSS. Unlike LSS, the new short version of the life skills scale (LSS-S) was based on the distinction between participation (six items; sample item: “Having confidence in people close to you”), attunement (six items; sample item: “Making a plan to reach a goal”), and perspective taking (eight items; sample item: “To become familiar with what others think”). The scale was answered on a 7-point Likert scale ranging from (1) *Strongly disagree* to (7) *Strongly agree*.

Results

The factor structure of the LSS-S was tested through a second order CFA with the three factors of participation, attunement, and perspective taking loading into one superordinate factor of life skills. This approach was supported by the conceptualization of life skills and the theoretical assumptions of life psychology (Bertelsen, 2013), providing the foundation for our scale development. The results yielded acceptable model fit for such a factor-structure, CFI = .95; SRMR = .05; RMSEA = .04. In this model, factor loadings were all acceptable ($\geq .4$), ranging from .50 to .73 (see Table 1 for factor loadings and means). Consequently, the results of study 1 indicate a solid factor structure for the LSS-S, and consequently all items were kept in the scale for further validation.

Internal consistency reliability was good for all three subscales with the following Cronbach's alpha values: participation $\alpha = .80$, attunement $\alpha = .84$, and perspective taking $\alpha = .85$. The aggregated scale had excellent internal consistency reliability with $\alpha = .94$. Furthermore, split-half reliability was examined for the whole scale (odd-even reliability). This estimation yielded good reliability with $r = .91$.

Study 2: Establishing Convergent Validity and Predictive Validity

Methods

The second objective of establishing convergent validity was sought by exploring the relationship between the LSS-S and the original LSS, Self-Determination, as well as self-efficacy. This was done through bivariate correlation analyses employing a new sample of participants.

Procedures and Participants

Like study 1, the data was collected through purposive non-random sampling using an online self-report questionnaire. Participants were recruited through Amazon Mechanical Turk (Buhrmester et al., 2011). There were 180 participants in this sample; all were American college students ($M_{age} = 22.67$, $SD = 1.97$). Within this sample, 57.2% percent were male and 42.8% were female.

Measures

Besides questions regarding age and gender, participants answered the following measures:

Life Skills Scale – Short (LSS-S) was included in the same version as tested in study 1 (see Table 1). Internal consistency reliability was acceptable to good with the following Cronbach's alpha values: participation $\alpha = .78$, attunement $\alpha = .83$, and perspective taking $\alpha = .87$.

General Self-Efficacy Scale (GSE; Schwarzer, & Jerusalem, 1995) measures the individuals' belief in their ability to achieve goals. The scale comprises ten items and yielded good internal consistency reliability with Cronbach's $\alpha = .89$. The items were answered through a 4-point Likert scale ranging from (1) *Not at all true* to (4) *Exactly true*. A sample item reads, "I can usually handle whatever comes my way."

Self-Determination Scale (SDS; Sheldon, Ryan, & Reis, 1996) assesses individual differences in how people function in a self-determined way. Internal consistency reliability for the scale was good with Cronbach's $\alpha = .85$. The scale includes ten items that each comprise two (A and B) statements. The scale is answered through a 5-point Likert scale whether (1) *Only A feels true* or (5) *Only B feels true*. Sample items include: (A) "I do what I do because it interests me," and (B) "I do what I do because I have to."

Life Skills Scale (LSS; Ozer & Bertelsen, 2019) comprises 40 items pertaining to insufficiently developed life skills divided across the four aspects of "want," "ability," "external conditions," and "being met." Each of the ten life skills is then represented with one item within each aspect. The aspects of "want" and "ability" were then aggregated into the superordinate dimension of *agency* and "external conditions," and "being met" was aggregated into a *structure* dimension. Internal consistency reliability for these two dimensions was good: agency $\alpha = .95$ and structure $\alpha = .95$. Responses were scored on a 7-point Likert scale ranging from (1) *Strongly disagree* to (7) *Strongly agree*.

Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) is a measure of global life satisfaction. The scale consists of five items and yielded good internal consistency reliability with Cronbach's $\alpha = .91$. All items were answered on a 7-point Likert scale ranging

from (1) *Strongly disagree* to (7) *Strongly agree*. Sample items include, “So far I have gotten the important things I want in life.”

Results

As indicated in Table 2, a strong correlation emerged among the three dimensions of LSS-S reflecting how these dimensions are clearly tapping into the same concept of life skills and at the same time distinct facets in regard to their particular focus on participation, attunement, and perspective taking. Furthermore, modest to moderate negative correlations between the new LSS-S and the established LSS suggest that although these two measures are clearly related, they are not tapping into the exact same aspect of life skills. That is, while LSS asks questions regarding specific aspects of life skills such as intentions, competencies, and how the life skills are supported by others and the contextual setting, the LSS-S concerns a more general conception of how developed one’s life skills are determined to be in regard to the characteristics of the individual’s interaction with the context.

Investigating the correlations between LSS-S and proximal and well-established criterion measures indicates whether the relationship between the developed measures of life-attachment and life skills relates to established measures as expected, allowing us to test the criterion-related validity of the scales. As expected, the three aspects of life skills correlated significantly and positively with both self-determination ($r_{\text{participation}} = .41, p < .01, r_{\text{attunement}} = .43, p < .01, \text{ and } r_{\text{perspective taking}} = .40, p < .01$) and self-efficacy ($r_{\text{participation}} = .50, p < .01, r_{\text{attunement}} = .60, p < .01, \text{ and } r_{\text{perspective taking}} = .53, p < .01$). These moderate correlations indicate that having highly developed life skills is associated with self-determined behavior as well as a belief in the ability to execute proper actions in a given situation. At the same time, the correlations indicate that life skills are a distinct concept concerning how to handle the typical challenges of everyday life.

Next, we sought our the third objective of establishing predictive validity. That is, we examined how well LSS-S could predict a relevant outcome measure of well-being. This investigation was primarily done through linear regression analysis. First, the correlation matrix (see Table 2) indicates that the short version of the life skills scale is a stronger predictor of well-being as compared to the previous life skills scale. Indeed, all dimensions of the new short version of the life skills scale were significantly correlated with life satisfaction, while neither the agency nor the structure aspect of the LSS was.

Second, we ran a hierarchical regression analyses controlling for the influence of gender and age. In order to inspect the various dimensions of LSS-S, we examined all three sub-dimensions of the LSS-S in relation to life satisfaction and found that LSS-S_{participation} ($b = .63$, 95% CI [.33, .94]; $\beta = .46$, $p < .001$) was a significant predictor of satisfaction with life, while LSS-S_{attunement} ($b = .09$, 95% CI [-.22, .40]; $\beta = .07$, $p = .56$) and LSS-S_{perspective taking} were significant ($b = .01$, 95% CI [-.32, .33]; $\beta = .01$, $p = .96$) were not. This suggests that the different dimensions of life skills differ in regard to predicting life satisfaction where the participation dimension is the strongest predictor.

In sum, the convergent validity analyses reveal the LSS-S to be a solid measure relating to approximate concepts of self-determination and self-efficacy. At the same time, the concept of life skills measured through LSS-S does not appear to be identical to these concepts and thus appears to be a distinctive concept including different sub-dimensions. Among these sub-dimensions, the life skills associated with participation in life were the strongest predictor of life satisfaction.

Discussion

The present study sought to develop and validate a short measure of generic life skills that can capture the three dimensions of participation, realistic attunement, and perspective taking. The three-factor structure was confirmed in a second-order CFA, and analyses of convergent and

predictive validity suggest that the LLS-S is a reliable and relevant measure yielding important psychological implications.

Within the LLS-S structure, the three dimensions of life skills were strongly correlated yet conceptually distinct. This could suggest that the overall aggregate dimension of life skills could yield the clearest operationalization. However, as the analysis of predictive validity showed, one sub-dimension appears to hold more predictive power as compared to the two other dimensions regarding specific outcome variables. Until now, the empirical research on life skills has not been differentiated in regard to these categories of life skills (Ozer & Bertelsen, 2019); consequently, the differentiation among the three dimensions of life skills should be examined further to determine how they are utilized vis-à-vis various life tasks and what psychological consequences they comprise.

The concept of life skills is distinct yet related to similar conceptions such as self-determination and self-efficacy. This was supported by our results indicating moderate correlations in the convergent validation. Both self-determination and self-efficacy are central components in the integrative theory of life psychology in regard to the central concept of *agency* (Bertelsen, 2013). According to Galagher (2012), a sense of agency relates to a sense of intentionality indicating that actions and behavior are self-initiated. The self-determination theory (Ryan & Deci, 2000) depicts motivation as the central aspect of activation and intention including energy, direction, and persistence. Accordingly, such intentional motivation concurs with the aspect of “want” in the conception of life skills. Indeed, the motivational aspect of engaging in a life project or solving a life task is directed by the self and forms a central aspect of the life skills as reflected in the moderate correlations between these measures. However, the conception of life skills further extends the understanding of agentic life skills to include the aspect of “ability.” According to Badura (1993), a strong sense of efficacy enhances accomplishments. That is, beliefs in one’s

efficacy and abilities to solve life tasks are important aspects of human functioning and therefore, the conception of self-efficacy relates to the aspect of “ability” in the conception of life skills, which is reflected in the moderate correlations between these measures. Indeed, the agency aspect of life skills concerns 1) the individual wanting and being able to position oneself in life, 2) wanting and being able to reflect upon one’s life, and 3) wanting and being able to view life from one’s own and other’s perspective.

Surprisingly, the correlations between the sub-dimensions of LLS-S and a previously established measure of life skills yielded only modest, yet significant associations. The previous operationalization of life skills was centered on the interplay between *agency* and *structure* in regard to the ten identified life skills (Ozer & Bertelsen, 2019). The operationalization in LLS-S is founded on what the individual evaluates as being typical for him or her to master in regard to the ten life skills. Thus, such a conception aligns more closely with the “ability” or the “doing” aspects of life skills— that is, the aspects that characterize the realized orientation and actualized behavior which are a result of the interplay between *agency* and *structure*. Indeed, such an operationalization taps into metacognitive reflections and evaluations of the individual’s abilities, attitudes, and behavior concerning the domains of the ten life skills. Such actualization will always be directed toward and by the surrounding context. While the LLS-S (20 items) is significantly shorter than LSS (40 items), the focus on the three categories of life skills in regard to what is self-assessed as being typical for the individual provides new possibilities within life psychology.

The central concept of life skill holds great opportunities for future research and implications of life psychological theory. As indicated in the present study, life skills are significant in regard to life satisfaction. In other words, if one’s life skills are adequately developed to meet the requirements of the related life tasks, the individual can reach a good enough life (Bertelsen, 2013). However, the implications of life skills are not limited to the individual but apply as central concepts in regard to

understanding the individual's contextual embeddedness. In contemporary globalized societies, local embeddedness can appear threatened. According to Bauman (2001) individuals are becoming more detached from their local communities, leading to more instrumentalized social interaction and resulting in poorer psychological well-being. Consequently, life skills that can address the task of establishing, maintaining, and developing one's community, and subsequently a locally embedded life, emerge as pivotal for well-being and for living in peaceful co-existence (Bertelsen, 2013). On the contrary, problematic participation, poor attunement, and a lack of perspective taking can result in extremism in which individuals are endorsing comprehensive societal change with no concerns for human co-existence and sometimes even endorsing the use of illegal or violent means in relation to this quest (Ozer & Bertelsen, 2019). Additionally, a life psychological study of life skills development among high schools students found that self-administered life psychological interventions could significantly enhance the student's life skills (Bertelsen, Ozer, Faber, Jacobsen & Lund-Laursen, in press). As such, the LLS-S holds great potential in regard to educational psychology and the possibility of developing students' skills in adequately addressing the challenges associated with student life and civic participation.

Limitations and Future Research

There are several limitations to the present study that should be addressed. Although life skills are conceptualized as being generic, in the present study we only tested the measure in an American student sample. Accordingly, cross-cultural validity has yet to be established in future research along with analysis of how well the scale works across different life stages. The strongly correlated categories of life skills could cause concern regarding multicollinearity. However, in our analysis, the Variance Inflation Factor (VIF) values were all well below five, indicating that there was no collinearity in our data (O'Brien, 2007). Finally, future research is needed to more extensively establish the predictive power of LLS-S and the three sub-dimensions of participation, realistic

attunement, and perspective taking in relation to the various relevant fields of conducting life psychological research.

Conclusion

The present paper validates a new measure of life skills in accordance with the theory of life psychology. These skills are conceptualized as being generic and central in dealing with everyday life tasks and furthermore in reaching one's goals in life. In our new measure, the life skills are grouped into three categories: 1) participation, 2) realistic attunement, and 3) perspective taking, reflecting the central skill categories for reaching a good enough life. We hope that our new measure proves useful in developing life psychological research to provide insights facilitating interventions that equip individuals with the life skills needed to handle challenges in life.

Compliance with Ethical Standards

The authors declare that they have no conflict of interest. Furthermore, the study adhered to the Danish national ethical guidelines for research. Institutional review boards or committees are not mandatory at Danish universities for such a questionnaire study. Informed consent was obtained from all individual participants included in the study.

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THE SHORT LIFE SKILLS SCALE

Table 1. Item wording, factor loadings and means for the short version of Life Skills Scale

Item wording	Loading			Mean (<i>SD</i>)
It is typical for you, that you master the following...	Participation	Attunement	Perspective taking	
1. Having a warm relationship with people close to you.	.71			5.15 (1.48)
2. Having confidence in people close to you.	.60			5.14 (1.40)
3. Creating conditions that benefit your way of life.	.68			5.21 (1.31)
4. Having an overview of the conditions that create the basis for your way of life.	.73			5.10 (1.37)
5. Making a personal effort for a community, an organization or an important cause.	.47			4.70 (1.55)
6. Helping in a community, an organization or an important cause.	.53			4.70 (1.51)
7. Being attentive in the present situation.		.59		5.40 (1.31)
8. Concentrating on what you participate in for the moment.		.67		5.20 (1.33)
9. Making a plan to reach a goal.		.69		5.38 (1.40)
10. Having an overview regarding how you best reach a goal.		.73		5.26 (1.30)
11. Reflecting over what you think one should do in a specific situation.		.72		5.21 (1.36)
12. Thinking about what it means to be a good person.		.69		5.26 (1.36)
13. Being aware of the body language of yourself and others.			.62	5.02 (1.47)

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14. Being aware of sensory input from your surroundings (sounds, feelings on your skin, smells, etc.).	.64	5.01 (1.41)
15. Knowing what you think.	.72	5.40 (1.33)
16. Knowing your own opinion to a situation or a challenge.	.73	5.24 (1.27)
17. To become familiar with what others think.	.50	5.06 (1.31)
18. To become familiar with what others feel.	.59	5.01 (1.33)
19. To become familiar with the explanation behind different sets of rules, regulations, knowledge, or beliefs about the world and life.	.67	5.00 (1.31)
20. To become familiar with the intention with different sets of rules, regulations, knowledge, or beliefs about the world and life.	.62	5.10 (1.39)

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Table 2. Correlation matrix and means for LSS-S and related measures

Variable	2.	3.	4.	5.	6.	7.	8.	Mean (<i>SD</i>)
1. LSS-S Participation	.75**	.76**	-.26**	-.17**	.41**	.50**	.51**	4.90 (1.06)
2. LSS-S Attunement		.76**	-.31**	-.16**	.43**	.60**	.41**	5.09 (1.04)
3. LSS-S Perspective Taking			-.29**	-.20**	.40**	.53**	.40**	4.96 (1.01)
4. LSS Agency				.71**	-.46**	-.37**	-.09	3.09 (1.29)
5. LSS Structure					-.45**	-.33**	-.13	3.31 (1.28)
6. Self-Determination						.59**	.44**	3.58 (0.79)
7. General Self-Efficacy							.48**	3.04 (0.55)
8. Satisfaction with life								4.72 (1.47)

Note. ** $p < .01$. LSS-S = Life Skills Scale – Short; LSS = Life Skills Scale.