

Exploring and assessing meaning in life in elementary school children: Development and validation of the meaning in life in children questionnaire (MIL-CQ)



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ABSTRACT

Meaning in life, which is almost unanimously recognized as a fundamental component of subjective well-being, has received little research attention when it comes to children, presumably due to a lack of suitable measurement tools for this age range. This study provides evidence for the internal consistency, factor structure, and validity of the Meaning in Life in Children Questionnaire (MIL-CQ), a new 21-item self-report measure of the presence and the sources of meaning in life in children, based on Viktor Frankl's concept of the 'meaning triangle' (Frankl, 1959). The MIL-CQ was administered to 1957 elementary school children aged 9–12 in two diverse samples from several cities in Israel. Exploratory and confirmatory factor analyses supported a 3-factor structure (creative, experience, and attitude), representing different sources of meaning in life. Children's level of meaning in life was positively associated with their life satisfaction and positive affectivity (higher positive emotions and lower negative emotions), and negatively with social and emotional difficulties. Girls reported significantly higher overall meaning in life than boys, and lower levels of social, emotional and behavioral problems. Theoretical and research implications of these findings are discussed.

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1. Introduction

Meaning in life is a primary personal resource that has consistently been found to be associated with mental health and psychological well-being throughout the human life span (Steger, Oishi, & Kashdan, 2009). However, studies of meaning in life have focused almost exclusively on adolescents and adults, perhaps because researchers have assumed that the psychological complexity involved in the development of meaning in life could only be achieved by mature individuals (Brassai, Piko, & Steger, 2011). In fact, to date there has been minimal examination of the development of meaning in life in children (Taylor & Ebersole, 1993).

In the last few decades, a few studies have challenged the assumption that a sense of meaning in life can only be achieved by adults or older adolescents, by demonstrating that young adolescents and children can produce viable and significant expressions about the meaning of their lives. In the early 80s, De Volger and Ebersole (1983) found that eighth-grade participants' descriptions of the sources of their life meaning seemed substantively similar to those reported by college students. A decade later, Taylor and Ebersole (1993) asked much younger elementary school children what was the most important to them in their lives as a whole. Most first grade participants were able to express

a personal life meaning, especially in the context of their relationships, activities and habits.

In the last 20 years, psychologists have come to increasingly acknowledge the importance of meaning in life for positive youth development (see Damon, Menon, & Bronk, 2003 for a review). In addition, there has been continual development of diverse methodological approaches to study adolescents' life meaning and related constructs such as purpose in life, and the pursuit of personal goals (e.g. Steger, Frazier, Oishi, & Kaler, 2006). However, research on this topic is still restricted by a lack of assessment tools applicable to young children. Existing tools that measure life meaning in adolescence (e.g. Steger et al., 2006) may fail to reflect the nuances and level of understanding of children at the concrete-operational stage of development (7–12) (Piaget, 1952). In response to this need, the main goals of the present study were to (a) develop and validate a new instrument for assessing meaning in life in children, closely grounded in the notion of the existential framework of meaning in life (Frankl, 1959); (b) identify core components of meaning in life during middle childhood; and (c) examine whether and to what extent the value of meaning in life can account for children's positive social, emotional, and behavioral developmental outcomes.

1.1. Pathways towards a meaningful life

There are numerous definitions of meaning in life. Although their specifics differ, they all converge on the notion that meaning in life

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involves motivational, cognitive, and emotional/evaluative components (Steger, 2012). The motivational component of meaning in life involves a sense of goal directedness or purposefulness (Emmons, 2003), which reflects the extent to which people perceive themselves as living in alignment with their overarching goals through their daily lives. The cognitive component refers to an understanding of the self and its place in the world, and achieving a coherent sense of self and life (Antonovsky, 1993). The emotional/evaluative component is related to sensing a transcendent meaning of life that connects the individual to all human beings and to a higher power, God, or an 'Ultimate Reality' (Walsh, 1999), or feeling that life is significant within the larger scheme of the universe (George & Park, 2014). Thus, meaning in life encompasses a sense of purpose, comprehension, and mattering (King, Hicks, Krull, & Gaiso, 2006).

One of the fullest theoretical conceptualizations of meaning in life is Viktor Frankl's theory of Logotherapy (Frankl, 1959). Frankl (1959) posited that human beings have a "will to meaning", which he defined as a powerful drive to find significance and meaning in their lives. He saw the search for meaning in life as the main motivation for living, and argued that people can find meaning even under the most difficult circumstances. Frankl characterized a range of human motivations for meaning, and suggested three primary needs for meaning in life: the need to create meaning in daily life and to live a fulfilling life, the need to construe and make sense of events and experiences through cognitive processes, and the need to make sense of human existence and to explore ultimate meanings of life (Wong, 1997). To a certain extent, this distinction constituted one of the first building blocks of meaning structure, in terms of its motivational, cognitive, and affective/evaluative components.

However, the value of Frankl's theory goes beyond the recognition of human needs to discover meaning in that it explicitly focuses on the drive to actively create meanings, and depicts the behavioral and cognitive processes that enable it. This is the crux of Frankl's 'meaning triangle': the three creative, experiential and attitudinal pathways through which one can discover or create meaning (Frankl, 1959, p. 133). The creative pathway inquires what individuals give to the world in terms of their creations (e.g., work, school, deeds, dedication to personal goals). This pathway incorporates using individual assets to fulfill one's vocation in life and contribute to the society more broadly and is hence a self-transcendent goal. The experiential pathway focuses on what the individual takes from the world in terms of experiences and encounters (e.g., nature, art, humor, roles, love, relationships). The attitudinal pathway relates to the ways a person approaches suffering in life and experiences pain. Through the implementation of a positive attitude in the face of negative or traumatic events, Frankl believed that the individual can find increased meaning (Batthyany & Russo-Netzer, 2014; Frankl, 1959). In its simplest form, Frankl's (1959) theory views meaning as enacted through one's personal accomplishments, interactions with others, art, and the natural world, while overcoming inevitable negative experiences.

Several assessment batteries have been developed to measure Logotherapy related concepts (see Melton & Schulenberg, 2008 for a review). Research has primarily utilized the Purpose in Life test (PIL; Crumbaugh & Maholick, 1969) and/or the Life Purpose Questionnaire (LPQ; Hutzell, 1989) that were constructed to be general measures of meaning and purpose in life. Studies that used these measures have reported associations between perceived meaning in life and positive affect, happiness, life satisfaction, and subjective well-being (King et al., 2006). By contrast, less meaning in life has been related to mental health symptoms such as depression and anxiety (Zika & Chamberlain, 1992). However, no studies have attempted to adapt these measures to assess meaning in life in young children. The prime reason is the highly abstract and general formulations of meaning in life in these questionnaires that are too difficult for children to comprehend.

1.2. Exploring meaning in life in children

Based on the theory of Logotherapy, meaning in life can be viewed as an abstract, individual concept, demanding a high level of self-

awareness and higher-order thinking to achieve full comprehension of one's life experiences and commitment to lifelong purpose and goals. From this standpoint, it is likely that children would have difficulties experiencing a sense of meaning of life because of their emotional and cognitive immaturity. Piaget (1952) suggested that children's concrete thinking makes it difficult for them to consolidate a coherent sense of self and life, which demands formal, abstract thought operations that emerge after age 11. Steger, Bundick, and Yeager (2011) also posited that the cognitive capacities required to describe and comprehend one's life experience only develop actively during early adolescence.

However, a few studies challenge these hypotheses by finding that children as young as 8–10 can think abstractly (Davydov & Kilpatrick, 1990). In addition, it is likely that children do express certain aspects of meaning, which however are manifested differently than in adults. A qualitative analysis of interviews in a study on the posttraumatic growth of children who survived a traffic accident reported a significant increase in their reported sense of meaning in their life, in terms of a change in their life priorities and goals, and a re-evaluation of what was important to them (Salter & Stallard, 2004).

In one of the very few studies that has examined the meaning in life of children directly, Taylor and Ebersole (1993) asked children aged six and seven: "In your whole life what is most important to you?" The responses were classified into different categories of meaning in life, including relationships, helping others, beliefs, objects, personal growth, health, schooling, pleasure, activities, school achievement, and appearance. The authors concluded that when children are asked concrete questions about meaning rather than when asked more abstract and global queries, they are capable of providing lucid, clear descriptions of the sources of meaning in their life.

The present study adapted Frankl's (1959) 'meaning triangle' conceptualization to construct an instrument to measure life meaning in children, which is dubbed the Meaning in Life in Children Questionnaire (MIL-CQ). Qualitative studies have shown that the three meaning triangle pathways (e.g., creative, experiential, and attitudinal) are crucial to successful intervention protocols in both children and adults who are confronted with difficulties or negative life events, such as patients in the advanced stages of disease or diagnosed with mental health issues (Frankl, 1969; Greenstein & Breitbart, 2000; Kang, Kim, Song, & Kim, 2013). Because the three pathways present a concrete range of cognitive, interpersonal, behavioral, and emotional manifestations of meaning in daily life, it is likely that they can be successfully expressed in a clear, concrete, and child-friendly manner.

The questionnaire is made up of three subscales that reflect Frankl's three Creative, Experience, and Attitude pathways towards discovering a meaningful life. The creative subscale assesses children's sense of meaning stemming from their self-concordant actions, deeds, everyday behaviors, and habits. The experience subscale examines the child's connectedness experiences to family, friends, all humans, or to transcendent states and entities such as nature, art, beauty, God, or a supreme power. The attitude subscale examines children's positive approach to experiences of pain, hardship, difficulties, disappointments, and suffering that are part of life experiences.

The current study involved an evaluation of the MIL-CQ on two large samples of children aged 9–12. In addition, it examined the relationships between the three pathways of meaning in children and their socio-emotional functioning (behavioral problems, emotional symptoms, peer relations problems, hyperactivity, and pro-social behavior), and their subjective well-being (life satisfaction, and positive and negative emotions). In line with previous research that found positive associations between meaning in life and subjective well-being (King et al., 2006), we hypothesized that we would also find positive associations between children's life meaning, life satisfaction, and positive affectivity (lower negative emotions and higher positive emotions). In addition, consistent with the literature reporting negative relationships between meaning in life and mental health problems (Zika & Chamberlain,

1992), we predicted negative associations between children's sense of meaning and their emotional and behavioral difficulties.

2. Method

2.1. Participants

Two samples of participants were recruited from elementary schools of several geographically and economically diverse cities in the center of Israel, with the assistance of the municipal education departments. Participants in sample 1 were 883 children, aged 9–12 years (437 boys and 446 girls; Mean age = 10.48, $SD = 0.73$) from three elementary schools. The children were mostly Jewish (96%), with 6% reporting Orthodox adherence, 32% traditional and 62% secular. Sample 2 was composed of 1074 school children aged 9–12 (Mean age = 10.71, $SD = 0.85$; 533 boys and 541 girls) from another three elementary schools. Of the participants, 97% were Jewish, with 4% reporting Orthodox adherence, 28% traditional and 68% secular.

2.2. Procedure

Using the principles of questionnaire construction recommended by Clark and Watson (1995), the development of the MIL-CQ was strongly theory-driven. Using a rational-theoretical approach, two scale developers, who are also researchers in the field of meaning with extensive experience in working with children in clinical and educational practices, wrote 27 items that appeared consistent with Frankl's theoretical conceptualization of the three target pathways for meaning (Frankl, 1959). In a pilot test conducted for the present study, the MIL-CQ was administered to a sample of 87 fourth to sixth graders. Comments by the children regarding the clarity and reading level of several items resulted in their rewording.

The current study involved a three-part evaluation of the MIL-CQ. The first sample was used for exploratory factor analysis (EFA), in which items were selected for the final version of the questionnaire. The second sample was utilized to examine the factor structure obtained in the EFA and to test the study hypotheses. After receiving municipal and the University's Helsinki Ethics committee authorizations, the children's parents were informed about the study and were asked to authorize their child's participation. If the parent consented, the signed consent form was sent to the teacher. There were no objections on

the part of parents. The children received written consent and were told they could withdraw at any point of the study and that withdrawal would have no effect on their grades, relationship to their teacher, etc. Measurements were collected anonymously by research assistants, who administered questionnaires to the participants at their schools during the school day.

2.3. Measures

2.3.1. The meaning in life in children questionnaire (MIL-CQ)

The MIL-CQ developed for the present study is a self-report inventory for children's meaning in life based on the three pathways for meaning proposed by Frankl (1959) in the 'meaning triangle'. The final version of the questionnaire consisted of 21 items in three subscales: creative (8 items), experience (7 items) and attitude (6 items), which reflect different pathways for meaning in life. The items are presented in Table 1. Participants responded to each item on a 5-point Likert-type scale ranging from 1 (not at all) to 5 (to a very large extent). The items were averaged to produce each subscale score and a total meaning in life score. The psychometric properties of the questionnaire are presented in the Results section.

2.3.2. The positive and negative affect schedule for children (PANAS-C-P; Ebesutani et al., 2012)

Participants completed the 10-item self-report measure used in child and adolescent populations to measure various mood states in the few weeks prior to the study. Each adjective is rated on a 5-point Likert scale ranging from 1 (very slightly or not at all) to 5 (extremely). Items are summed to yield a total positive (PA) and negative affect (NA) scores. In this study, the Cronbach's alpha coefficients were 0.84 and 0.81 for positive and negative affect, respectively.

2.3.3. Satisfaction with life scale-children (SWLS-C; Gadermann, Schonert-Reichl, & Zumbo, 2010)

The Satisfaction with Life Scale for children comprises five items that assess satisfaction with life in children, which are rated on a 5-point Likert scale ranging from 1 (disagree a lot) to 5 (agree a lot). Scores are then summed to yield a total score. In the current sample, the scale's reliability was satisfactory ($\alpha = 0.80$).

Table 1

Exploratory factor analysis: factor loadings of the MIL-CQ items based on a principal components analysis with oblimin rotation.

Item	Attitude	Creativity	Experience
1 I think that even if something bad happens in my life, I can overcome it.	0.80		
2 Even though bad things sometimes happen to me, I think life is beautiful.	0.76		
3 Even though there are sad things in the world, I think life is worth living.	0.73		
4 I think I can learn or gain something from experiences, even when I experience something bad.	0.67		
5 I think that even in negative experiences I can find something positive.	0.66		
6 I accept the things I cannot change in myself or the world.	0.59		
7 I make up songs, stories, games, and other things that can contribute to others.		0.67	
8 I like taking the time to do important and meaningful things.		0.64	
9 I feel I do things that are beneficial to others.		0.63	
10 I do things that are important for others.		0.58	
11 I often do things to contribute and help others.		0.56	
12 My actions help my environment and the world.		0.47	
13 I try to spend my free time doing meaningful things.		0.47	
14 I take actions that will help me achieve the goals in life that are important to me.		0.43	
15 Being with my family gives me strength.			0.63
16 My relationships with people my age makes me feel good.			0.61
17 I enjoy the beauty in life.			0.52
18 I feel happiness and joy when I am with people who are close to me.			0.51
19 I like to travel and enjoy the beauty that exists in the world.			0.49
20 I feel connected to God or a higher power that gives me guidance.			0.44
21 Being in nature makes me happy and calm.			0.41
Eigenvalue	6.54	2.65	1.17
Percent of variance	32.71	13.24	5.83

2.3.4. Strength and difficulties questionnaire (SDQ; Goodman, Meltzer, & Bailey, 1998)

The SDQ is a 25-item questionnaire that assesses emotional and behavioral problems in children aged 3–16. The questionnaire includes five subscales that are comprised of five items each, as follows: emotional symptoms, conduct problems, hyperactivity, peer relationship problems, and pro-social behavior. Each item was rated as “not true”, “somewhat true” or “certainly true”. The SDQ yielded satisfactory Cronbach's alphas (0.75–0.84) in the current study.

3. Results

3.1. Factor structure of the MIL-CQ: exploratory factor analysis

A principal component analysis (PCA) was used to explore the factor structure of the MIL-CQ in the first sample. We conducted the PCA using a direct oblimin oblique rotation, which allows the factor scores to correlate with each other. Kaiser's Little Jiffy criterion (number of eigenvalues > 1.0) was used to determine the number of factors in the questionnaire. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.91, indicating the suitability of using PCA (Field, 2009). The PCA with oblimin rotation resulted in a multi-factorial solution, and identified three factors that jointly accounted for 51.78% of the overall variance, with good inter-consistency among factors (see Table 1). Of the 27 items, 2 items were excluded due to a high factor loading for more than one factor; and 4 items were excluded due to a lack of a factor loading of 0.4 or above in any of the factors. In total 6 items were excluded this way, leaving 21 items in three factors. The three factors fitted the proposed theoretical three pathways for meaning, and were labeled Creative (Cronbach's alpha = 0.74), Experience (Cronbach's alpha = 0.80), and Attitude (Cronbach's alpha = 0.78). The internal consistency of the MIL-CQ total score was satisfactory (Cronbach's alpha = 0.84).

3.2. Confirmatory factor analysis

To assess the reliability of the EFA factorial structure identified in the first sample, a CFA was performed on the replication sample of 1074 children. Model fit was evaluated using four goodness-of-fit indices: the Non-Normed Fit Index (good fit ≥ 0.95 , satisfying fit ≥ 0.90), the comparative fit index (CFI) (good fit ≥ 0.95 , satisfying fit ≥ 0.90), the Standardized Root Mean-Square Residual (SRMR) (good fit < 0.05, satisfying fit < 0.08), and the Root Mean Square Error of Approximation (RMSEA) (good fit < 0.06, satisfying fit < 0.08) (Hu & Bentler, 1999).

Two types of models were compared. First, we examined a model with no correlations between the three subscales. This model showed a moderate fit to the data, NNFI = 0.75, CFI = 0.77, SRMR = 0.28,

RMSEA = 0.10. Second, we assessed an alternative model in which all the subscales were allowed to correlate. This model had satisfying fit indices, NNFI = 0.91, CFI = 0.94, SRMR = 0.06, RMSEA = 0.05, confirming the three factor model. The internal consistency alpha of the MIL-CQ total score in the second sample was 0.82. Of the subscales, the alpha was acceptable on the creative (0.73), experience (0.74), and attitude (0.80) scales.

3.3. Children's life meaning and socio-emotional functioning

Structural equation modelling (SEM) through AMOS 21 (IBM Inc.) was utilized for hypothesis testing on the second sample. The means and standard deviations for the variables, along with comparisons by gender are presented in Table 2. *t*-Test analyses indicated that girls had higher scores on the creative and experience subscales and on the overall meaning in life score. Girls also had higher positive emotions and pro-social behaviors, and lower levels of emotional symptoms, hyperactivity, conduct problems, peer problems, and total difficulties than boys. There were no significant age differences in the variables.

The bivariate correlations between the study variables are presented in Table 3. Small to moderate positive correlations were observed between all three MIL-CQ subscales, and positive emotions, life satisfaction, and pro-social behavior. There were also small to moderate negative correlations between the MIL-CQ Scores and various emotional and behavioral difficulties.

We parceled the 21 items of the MIL-CQ into the three subscales and treated them as indicators. The Attitudinal, Creative, and Experiential scores served as the first level latent variables and the total meaning score as the level two latent variable. The model examined the association between the total meaning in life score and two latent variables – SWB (positive emotions, negative emotions, and life satisfaction), and children's behavioral and emotional problems (as indicated by the SDQ total behavioral difficulties score, and the SDQ pro-sociality score). The model is presented at Fig. 1. The model exhibited good fit with the data (SRMR = 0.06, CFI = 0.95, NNFI = 0.94, RMSEA = 0.06).

As seen in Fig. 1, meaning in life was positively associated with SWB ($b = 3.07$, $SE = 0.24$, $\beta = 0.73$, $p < 0.001$). In addition, there was a significant negative relationship between meaning in life and children's difficulties ($b = -1.94$, $SE = 0.33$, $\beta = -0.77$, $p < 0.001$); thus both hypotheses were confirmed.

4. Discussion

The current study was designed to take an initial step towards empirically examining whether individual differences in meaning in life can be identified in elementary school children, and the extent to

Table 2
Means and standard deviations of the variables and gender differences.

Sample size	Total		Gender				Gender differences		
			Boys		Girls				
	1074		533		541				
	M	SD	M	SD	M	SD	<i>t</i> (1072)	<i>p</i>	Cohen's <i>d</i>
Attitude	3.72	0.78	3.69	0.80	3.75	0.74	1.28	0.20	0.08
Creativity	3.52	0.74	3.40	0.77	3.63	0.69	5.16	<0.001	0.32
Experience	3.89	0.71	3.80	0.75	3.97	0.63	4.02	<0.001	0.25
Meaning in life	3.70	0.64	3.62	0.68	3.78	0.57	4.18	<0.001	0.26
Positive emotions	18.23	4.09	17.95	4.04	18.46	4.11	2.05	0.04	0.13
Negative emotions	8.41	3.23	8.37	3.29	8.47	3.21	0.50	0.61	0.03
Life satisfaction	19.13	4.15	19.18	4.16	19.10	4.14	0.32	0.75	0.02
Emotional symptoms	3.85	2.29	4.14	2.32	3.58	2.24	4.02	<0.001	0.25
Hyperactivity	4.04	2.40	4.36	2.39	3.73	2.40	4.31	<0.001	0.26
Conduct problems	2.36	1.79	2.70	1.79	1.99	1.70	6.66	<0.001	0.41
Peer problems	2.62	1.91	2.74	1.93	2.48	1.87	2.25	0.02	0.14
Pro-social behavior	7.92	1.90	7.50	2.05	8.36	1.61	7.65	<0.001	0.47
Total difficulties	12.85	5.88	13.36	5.82	12.32	5.92	2.90	0.004	0.18

Table 3

Bivariate correlations between the MIL-CQ scores, subjective well-being, and emotional and behavioral difficulties.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Attitude	–											
2. Creativity	0.47***	–										
3. Experience	0.22***	0.14***	–									
4. Meaning in life	0.74***	0.81***	0.59***	–								
5. Emotional symptoms	–0.07	0.08*	0.08*	–0.06	–							
6. Conduct problems	–0.13***	–0.15***	–0.13***	–0.16***	0.36***	–						
7. Hyperactivity	–0.13***	–0.25***	–0.13***	–0.20***	0.30***	0.40***	–					
8. Peer problems	–0.20***	–0.07	–0.19***	–0.17***	0.35***	0.36***	0.15***	–				
9. Pro-social behavior	0.44***	0.56***	0.47***	0.58***	0.06	–0.30***	–0.28***	–0.21***	–			
10. Total difficulties	–0.30***	–0.02	–0.16***	–0.20***	0.74***	0.73***	0.70***	0.63***	–0.25***	–		
11. Positive emotions	0.48***	0.29***	0.34***	0.49***	–0.09*	–0.19***	–0.19***	–0.18***	0.35***	–0.35***	–	
12. Negative emotions	–0.31***	–0.01	–0.03	–0.15***	0.41***	0.34***	0.28***	0.24***	–0.09*	0.52***	–0.29***	–
13. Life satisfaction	0.46**	0.40***	0.28***	0.53***	–0.23***	–0.27***	–0.21***	–0.32***	0.36***	–0.38***	0.54***	–0.37***

Note. N = 1074

* $p < 0.05$.*** $p < 0.001$.

which Frankl's (1959) 'meaning triangle' is applicable during the middle childhood years. The first part of this study sought to validate and establish the factorial structure of the MIL-CQ. The findings indicate that Frankl's three avenues towards meaning in life, the creative, experiential, and attitudinal pathways, are pertinent for elementary school children in the age range of 9–12 years. Furthermore, confirmatory factor analysis and the examination of relationships with other psychological constructs showed acceptable preliminary psychometric support for the use of the MIL-CQ as an assessment tool to explore different sources and levels of meaning in children.

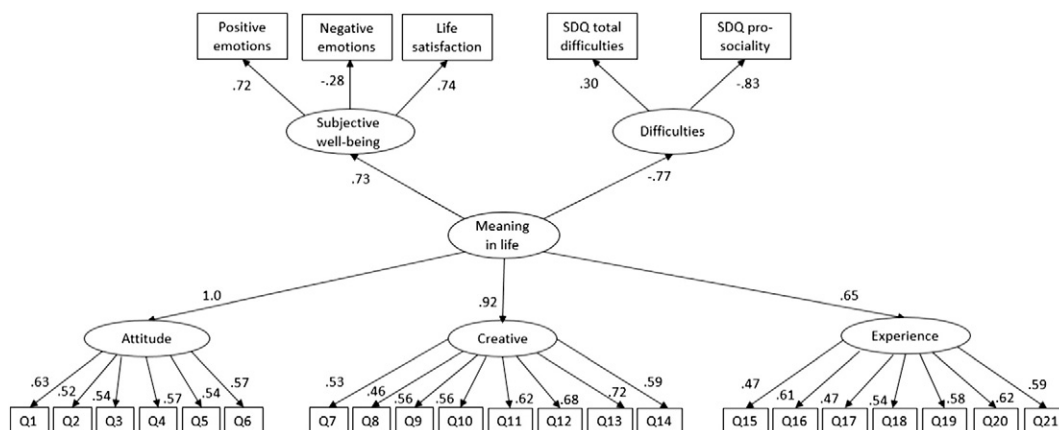
On the factorial level, the 21 items in the questionnaire fell into three factors on the secondary level, suggesting that meaning in life can be perceived as a multidimensional psychological construct that can be achieved in a variety of ways. These factors provide three distinctive conceptual pathways for cultivating meaning in life among children. One such pathway is the creative pathway, which is centered on the question: "How does the child contribute to the world in a way that he or she perceives as making a difference in his life and his surroundings?" On the operational level, the creative pathway represents a child's everyday behaviors and habits that provide him/her with a sense of meaning. This may be reflected in the goals and plans that are important to the child, or through the sense of purpose he/she derives from the very experience of both giving and helping others around him/her.

The experiential pathway addresses a fundamentally different question: "What does the world give the child that he or she perceives as making a difference in his/her life?" In other words, this pathway focuses on that which inspires enthusiasm in a child and an overall joy of

living. This refers to meaningful experiences that are not solely dependent on the child's actions. Rather, it encompasses the sense of purpose that arises from relationships with people and the encounter with events that exemplify the beauty of the world and the gifts it can offer. The experiential pathway highlights the potential that is inherent in human connections, belonging and positive interactions, and appreciation of sensory experiences.

The third pathway, the attitudinal pathway, focuses on questions such as "How does the child perceive negative aspects in life?" and "Does he/she accept that which cannot change and have a positive attitude toward the things that can change?" In contrast to the other pathways, the attitudinal pathway does not deal with the child's actions and experiences, but rather with the child's perceptions of the world. These findings indicate that the need for meaning is a fundamental existential experience among children as well, although since meaning is manifested differently in children, its detection requires age-appropriate questions which are defined through concrete operational behaviors, experiences, and thoughts.

Our findings also confirmed our expectation to find relationships between meaning in life and children's SWB as well as lower levels of behavioral and emotional problems. These findings converge with studies on adolescents and adults (Owens, Steger, Whitesell, & Herrera, 2009; Zika & Chamberlain, 1992) and indicate that even at an early age, meaning in life contributes to well-being and mental health. Analyses also revealed gender differences in the levels of sense of meaning and socio-emotional difficulties in the sample. Girls reported a significantly higher overall meaning in life than boys and scored higher on the creative and experiential subscales of the MIL-CQ. Moreover, in line with previous

**Fig. 1.** Associations between children's meaning in life and their subjective well-being and emotional and behavioral difficulties. SDQ = strengths and difficulties questionnaire.

studies, girls had lower levels of emotional and behavioral problems than their male counterparts (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999). These findings are consistent with previous research that has consistently indicated gender differences in the content of meaning narratives, with more relational and social themes in girls' narratives (Fivush & Buckner, 2003). This may explain the higher levels of meaning among girls in the 'experiential' subscale. However, to date, most studies have focused on adolescent and adult populations, thus making it difficult to interpret these reported differences. Future studies should continue to explore these potential gender differences.

This study has several limitations that should be taken into consideration. First, the study population included children aged 9–12. Future research should continue to evaluate the validity of the questionnaire for younger children, and also assess its relevance, clarity, and readability among samples whose reading level is lower than average for their age group. In addition, this study relied on self-report questionnaires completed by children themselves. In future research, it would be beneficial to gather information from multiple informants (i.e., parent and teacher reports), and develop alternative measurement tools for examining meaning in life in this age group. We also acknowledge the value of using a longitudinal study design in the future, which would allow us to monitor the fluctuations in meaning in life from early childhood to late adolescence.

Another limitation concerns a conceptual overlap between the creative subscale of the MIL-CQ and the prosocial subscale of the SDQ, given that behaviors that are intended to benefit others were considered by Frankl (1959) to be a source of meaning. The significant correlation found in this study between the creative subscale score and prosocial behavior may reflect this overlap. Future studies should incorporate other behavioral and emotional indices to examine the validity of the questionnaire. Finally, this study was conducted in Israel, a tumultuous political environment in which children are exposed to chronic political violence (Slone & Shoshani, 2014). This may impact different aspects of their meaning in life, SWB, and mental health (Shoshani & Slone, 2016; Slone & Shoshani, 2008). Hence the MIL-CQ should be utilized in different cultural contexts to draw broader conclusions regarding the development of meaning in life in early childhood.

Overall, this study presents compelling evidence that reflects the importance of exploring concepts of meaning among young children. It also acknowledges the need for more rigorous research to advance our understanding of the manner in which meaning is manifested in children's daily lives and experiences, and its profound effect on their well-being.

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