Sincere significance: the mediating role of basic psychological need satisfaction in the

relationship between authenticity and meaning in life

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Abstract

Current study investigates the mediating role of basic psychological need satisfaction in the relationship between authenticity and meaning in life. The self-determination theory states that authenticity and meaning in life are dependent on the degree to which one is satisfied in one's basic psychological needs. Further, it states that the concepts of authenticity and meaning in life are related. Online questionnaire data ($N = 158$) revealed that authenticity and meaning in life were positively related. Furthermore, no contribution of any separate basic need to meaning in life was found and no separate basic need was found to mediate the relationship between authenticity and meaning in life. The basic needs combined were responsible for a small contribution to meaning in life and a marginal partial mediation in the relationship between authenticity and meaning in life. Given the numerous benefits meaning in life brings, it is recommended to grant the authentic quest to meaning in life a prominent status in psychotherapy, beyond merely basic psychological need satisfaction.

Keywords: meaning in life, authenticity, basic psychological need satisfaction, self-determination theory

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Many psychological and philosophical scholars argue that experiencing meaning in life is necessary (Frankl, 1963; Nietzsche, 1889, Yalom, 2020). However, in recent years scholars have suggested that we find ourselves in a 'meaning crisis', suggesting that many people nowadays experience a lack of meaning, alienating them from the world and from others (Vervaeke, Mastropietro, & Miscevic, 2017). Research indicates that meaninglessness increases the risk of psychopathology and suicide, while enhancing meaning could alleviate mental illness and suicidal ideation (Kleiman & Beaver, 2013; Schulenberg, Strack, & Buchanan, 2011). This demonstrates the clinical relevance of the concept of meaning in life, often stressed by psychological schools inspired by the philosophical current of existentialism (e.g., Yalom, 2020). Next to meaning in life, these existential schools focus on individual authenticity, i.e., being true to one's own beliefs and values. These two concepts, meaning in life and authenticity, fit neatly in the theoretical framework of the self-determination theory (Ryan & Deci, 2017), a psychological theory focusing on self-actualization and human potential. This theory states that people have three innate basic psychological needs, and of which satisfaction largely accounts for an individual's authenticity and sense of meaning. This study investigates the relationship between the concepts of meaning in life and authenticity and the underlying role of SDT's basic psychological needs.

Meaning in Life

The question whether life has any meaning has been relevant to philosophy since its very beginnings, especially to the philosophical school of existentialism. Albert Camus (1955) stated that the fundamental philosophical question is whether life is worth living. Indeed, many existential philosophers argue that experiencing meaning in life enhances well-being and makes life bearable. Friedrich Nietzsche famously stated that 'If we have our own why in life, we shall

get along with almost any how' (Nietzsche, 1889, p. 6). In addition, psychiatrist Viktor Frankl sparked research into the relevance of meaning in life with his bestseller *Man's Search for Meaning* (1963), an account of his experiences in the Nazi death camp Auschwitz. Despite the horrible circumstances, he was able to withstand the suffering because he identified a clear purpose and meaning in his life. Frankl (1963, p. 113) famously stated, "In some ways, suffering ceases to be suffering at the moment it finds a meaning." Along these lines, Frankl developed a discipline called 'logotherapy', which states that the primary human motivation is to find meaning in life. Failing to recognize man's need for meaning will frustrate him and ignore the fundamental striving of human beings (1972) .

Recently, there is increased interest in using the concept of meaning in life (MIL) as a psychological construct, defined by Steger, Frazier, Oishi and Kahler (2006) as "the sense made of, and significance felt regarding, the nature of one's being and existence". Scholars have recognized the promising role of MIL in psychological treatment, as empirical research has shown MIL to be related to various positive individual outcomes. MIL is associated with, among others, enhanced well-being and life satisfaction (Steger, 2009; Zika & Chamberlain, 1992), better physical health (Czekierda, Banik, Park, & Luszczynska, 2017), less depression and anxiety (Steger, Mann, Michels, & Cooper, 2009), less substance abuse and suicidal ideation (Harlow, Newcomb, & Bentler, 1986; Kleiman & Beaver, 2013) and, as Nietzsche already recognized, enhanced coping with traumas and pain (Triplett, Teceschi, Cann, Calhoun, & Reeve, 2012; Dezutter, Luyckx, & Wachholtz, 2015). Capitalizing on the positive consequences of enhancing meaning is one of the main principles of existential psychotherapy (Yalom, 2020). Next to this, another important construct in existential psychotherapy is authenticity.

Authenticity

Like their concern for meaning in life, existentialists have been concerned with the concept of authenticity, which is found to be related to meaning in life (Moisseron-Baudé, Bernaud, & Sovet, 2022). Authenticity is commonly described as the degree to which one's actions truly reflect one's values and desires, and thus truly reflects who one 'is' (Ryan & Deci, 2017). One of the initiators of the modern literature on authenticity is Søren Kierkegaard. Stressing the importance of being an authentic self, he considered it a struggle, an undertaking that requires braveness and continuous self-reflection (Kierkegaard, 2013, Ryan & Ryan, 2019). Furthermore, the concept of authenticity is explored by philosophers such as Heidegger and Sartre. For Heidegger, authenticity consists of being fully engaged to and focused on making one's life one's own, while Sartre stated that authentic people make choices that are true to oneself and take responsibility for the actions they engage in (Guignon, 2002; Hestir, 2008; Sutton, 2020). In psychological research, authenticity is described as having two essential dimensions. First, being authentic means being self-authored: an authentic person should experience his actions as self-owned and volitional. Second, being authentic means being genuine, i.e., reflecting one's true experiences and revealing one's 'true self' (Ryan & Deci, 2017). In this vein, a body of research showed being authentic to be associated with various adaptive individual and social outcomes such as individual well-being (Rivera et al., 2019; Ryan & Ryan, 2019; Ryan & Deci, 2017), self-esteem and social support, performance and job satisfaction (Van den Bosch & Taris, 2014) and well-being in relationships (Brunell et al., 2010; Sutton, 2020).

Both authenticity and MIL are often explained in terms of the underlying mechanism of satisfaction of basic psychological needs. The theory behind this is the self-determination theory, which can prove a valuable theoretical framework to interpret the concepts of authenticity and MIL.

Underlying mechanisms

Interpreting authenticity and MIL in terms of basic psychological need satisfaction, we turn to the self-determination theory (SDT) (Ryan & Deci, 2017). This theory states that human beings have an innate striving to personal growth, which is facilitated by the satisfaction of three basic psychological needs: autonomy, relatedness and competence. *Autonomy* is the desire for people to be causal agents and to act in accordance to one's sense of self. Being autonomous is experiencing volition and the experience of having a feeling of choice of action. *Relatedness* is the desire to experience connection with other people and the desire to interact and care for others. It concerns the idea that one unconditionally matters in the eyes of others and that one is being cared for. Lastly, *competence* is the desire to feel effective and to experience control over the results in one's life. A feeling of competence arises out of experiences in which one effectively interacts with one's environment (Deci & Vansteenkiste, 2003; Ryan & Deci, 2017).

Satisfaction of these basic psychological needs predicts adaptive psychological, behavioral and social functioning and is associated with well-being and happiness (Ryan & Deci, 2017). On the other hand, frustration of these basic needs can lead to, among others, motivational, cognitive and affective decrements and an increased vulnerability to psychopathology and ill-being (Vansteenkiste & Ryan, 2013; see also Tindall & Curtis, 2019). Along these lines, self-determination theorists argue that basic need satisfaction and basic need frustration account for the 'bright' side (i.e., personal growth and human adaptation), respectively the 'dark' side (malevolence and psychopathology) of human functioning (Ryan & Deci, 2000; 2017).

SDT states that all three basic psychological needs are, in their own distinct manner, essential for an individual's well-being (Ryan & Deci, 2017; Vansteenkiste, Ryan, & Soenens, 2020). In accordance to this, research suggests that satisfaction and frustration on different needs show different outcomes. Fousiani, Dimitropoulou, Michaelides & Van Petegem (2016) suggest that frustration of the need for relatedness is more closely related to internalizing

problems, whereas frustration of the need for autonomy is more closely related to externalizing problems. Next to this, satisfaction of every basic psychological need is found to uniquely contribute to MIL and well-being, whereas frustration of every basic psychological need uniquely contributes to ill-being (Chen et al., 2015; Martela, Ryan, & Steger, 2018).

Ryan and Deci (2017) state that MIL is largely accounted for by basic psychological need satisfaction. In other words, when people are satisfied in their autonomy, relatedness and competence, they are likely to have the idea that their life is meaningful. Next to this, authenticity, defined as being genuine and acting in accordance to one's true self, strongly resonates with the basic psychological need for autonomy. Accordingly, Thomaes, Sedikides, van den Bos, Hutteman and Reijntjes (2017) demonstrated the tight link between authenticity and autonomy satisfaction. Further, SDT states that people are more inclined to freely express their desires, values and emotions when they are satisfied in their basic needs. In this manner, authenticity is facilitated by basic need satisfaction (Kernis & Goldman, 2006; Thomaes et al., 2017). Given that authenticity and MIL are found to be related and SDT suggests that both authenticity and MIL are facilitated by basic need satisfaction, it is suggested that the relationship between authenticity and MIL could be mediated by the satisfaction of all three basic needs and especially autonomy.

Present Study

In summary, current study investigates the relationship between the concepts of authenticity and meaning in life and the underlying role of SDT's basic psychological needs. In line with Martela and colleagues (2018) and Ryan and Deci (2017) (1) we hypothesize that total basic psychological need satisfaction, as well as each of the three needs independently, significantly contributes to the prediction of MIL. Second, (2) it is hypothesized that authenticity and MIL are positively related, in line with the findings of Moisseron-Baudé and colleagues (2022). Furthermore, in line with SDT and Thomaes and colleagues (2017) (3) we

hypothesize that total basic need satisfaction, as well as each of the three needs distinctly, mediate the relationship between authenticity and MIL.

Methods

Procedure

Data collection was done through a self-report survey on Qualtrics, which took around 15 minutes to complete. A convenience sample from the researcher's social network was used to recruit participants. The survey was distributed via social media and word of mouth. After opening the survey through the link, participants were given basic information about the study, such as the questionnaires that are administered, anonymity, the duration of the survey and contact information of the researchers. After giving informed consent, participants were asked about demographic information and successively presented questionnaires about authenticity, basic psychological need satisfaction and MIL.[1] After completing the survey, participants were thanked for their participation. Current study was approved by the university ethics committee under the approval number 22-1083.

Participants

A total of $N = 158$ participants were recruited for this study, of which 63 (39,9%) men and 95 (60,1%) women. Participants' age ranged from 18-71, with an average age of $M = 34.55$ ($SD = 14.09$). Regarding highest completed education, 15,2% selected secondary school, 8,9% finished post-secondary vocational education, 37,3% had a degree in applied sciences, 19,6% had a Bachelor's degree, 17,7% had a Master's degree and 1,3% enjoyed a different kind of education.

Measures

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[1] Next to this, participants were asked to complete a questionnaire about emotion regulation, unrelated to current study.

Authenticity

For measuring authenticity, the Authenticity scale by Wood, Linley, Maltby, Baliousis and Joseph (2008) was used. This scale consists of 12 items, measured on a 7-point Likert scale ranging from 1 (*does not describe me at all*) to 7 (*describes me very well*). The scale is divided into three subscales: authentic living (4 items; e.g., 'I live in accordance with my values and beliefs.'), accepting external influence (4 items; e.g., 'I am strongly influenced by the opinions of others.') and self-alienation (4 items; e.g., 'I feel out of touch with the 'real me.'). Every subscale shows good 2- and 4-week test-retest reliabilities with correlations between $r = .78$ and $r = .91$ (Wood et al., 2008). In the current study, for the subscale authentic living $\alpha = .72$, for accepting external influence $\alpha = .71$ and for self-alienation $\alpha = .79$. A high score on total authenticity indicates high authentic living, low external influence and low self-alienation. For this study, a Dutch translation of the original questionnaire by Wood and colleagues (2008) was made. The items are individually translated from English to Dutch by 3 students and translated back by a native English speaker.

Basic Needs Satisfaction

For measuring basic psychological need satisfaction, the Dutch version of the Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS) was used (Chen et al., 2015). This scale consists of 24 items, measured on a 5-point Likert scale ranging from 1 (*Not true at all*) to 5 (*Completely true*). For this study, only the 12 items measuring basic need satisfaction were used, consisting of three subscales of four items each: autonomy satisfaction (e.g., 'I feel a sense of choice and freedom in the things I undertake'), relatedness satisfaction (e.g., 'I experience a warm feeling with the people I spend time with') and competence satisfaction (e.g., 'I feel confident that I can do things well'). High scores on the subscales indicate need satisfaction. Cronbach's α for the subscales used are as follows: autonomy satisfaction $\alpha = .70$, relatedness satisfaction $\alpha = .82$, competence satisfaction $\alpha = .62$.

Meaning In Life

For measuring Meaning in Life (MIL), the Presence of Meaning scale of the validated Dutch version of the Meaning in Life Questionnaire (MLQ) was used (Steger et al., 2006). This scale consists of 5 items, measured on a 7-point Likert scale, ranging from 1 (*Absolutely Untrue*) to 7 (*Absolutely True*) (e.g., 'I have a good sense of what makes my life meaningful'). A high score on the Presence of Meaning scale indicates the experience of meaning in life. Current study showed $\alpha = .84$ for the Presence of Meaning scale.

Analyses

For all analyses, SPSS Statistics 26 was used. In a set of preliminary analyses, we will compute descriptive statistics of and correlation coefficients between every study variable (see Table 1). Subsequently, an independent t-test will be executed to compare the means of the study variables in terms of sex. Lastly, the correlation of every study variable with age will be investigated.

Regarding the main analyses, a set of regression analyses will be executed. For hypothesis 1, a multiple regression analysis will be done with autonomy satisfaction, relatedness satisfaction, competence satisfaction and possible covariates as predictor variables and MIL as outcome variable. For the second hypothesis, a correlational analysis will be executed, next to a mediation analysis by PROCESS with authenticity as predictor variable and MIL as outcome variable. For the third hypothesis, a mediation analysis will be executed by using model 4 of PROCESS with authenticity as predictor variable, MIL as outcome variable and respectively total basic need satisfaction, autonomy satisfaction, relatedness satisfaction and competence satisfaction as mediating variable.

Results

First, by examining the variables using boxplots, two outliers on the variable MIL and two outliers on the variable total basic need satisfaction were identified and deleted to meet the

assumption of normal distribution. After doing this, all study variables were normally distributed, with the exception of MIL and relatedness satisfaction, both being negatively skewed. For further analyses, Spearman's *rho* was used and parameters were estimated using bootstrapping with 5000 *N*-samples.

The correlations between the study variables were tested using Spearman's *rho* (see Table 1). Between all variables, significant positive relations were found.

Table 1

Descriptive Statistics and Spearman Correlation Coefficients for Study Variables

	M	SD	1.	2.	3.	4.	5.
1. Total basic need satisfaction	4.13	.38					
2. Autonomy satisfaction	3.94	.58	.78*				
3. Relatedness satisfaction	4.38	.58	.68*	.35*			
4. Competence satisfaction	3.97	.58	.69*	.42*	.22*		
5. Meaning in Life	5.41	.99	.32*	.29*	.25*	.25*	
6. Authenticity	5.42	.67	.66*	.64*	.39*	.46*	.31*

*Note: *p<.01*.

Various independent samples t-tests showed no significant mean differences between the sexes in the study variables. To test for correlation between age and the study variables, a Spearman correlational analysis between the study variables and age was executed. Except for relatedness satisfaction, between age and all study variables small to moderate significant correlations were found (ranging from $\rho = .20$ to $\rho = .39$). Relatedness satisfaction was not found to be correlated with age. Based on these findings, all further analyses will be controlled for age.

Hypothesis 1

The contribution of the three separate basic psychological needs in the prediction of MIL was investigated through a linear multiple regression. Autonomy satisfaction, relatedness satisfaction, competence satisfaction and age were included in the regression model which was found to be significant, $F(4,150) = 4.64$, $p < .01$; $R^2 = .11$. All predictors in the regression model were found to be non-significant separately: autonomy satisfaction $b = .23$, $p = .17$, relatedness satisfaction $b = .27$, $p = .07$, competence satisfaction $b = .25$, $p = .15$.

Hypothesis 2

A correlational analysis was executed to test the relationship between authenticity and MIL. A moderate positive correlation between authenticity and MIL was found ($\rho = .31$, $N = 156$, $p < .001$). Further the PROCESS model showed a significant total effect of authenticity on MIL ($b = .47$, $p < .01$).

Hypothesis 3

In all four mediation analyses, a significant total effect of authenticity on MIL was found. The first analysis, with total basic need satisfaction as mediating variable, revealed that the direct effect of authenticity on MIL was marginally significant ($b = .30$, $p = .06$) and the indirect effect was also marginally significant ($b = .17$, BI [-.03, .37]). Hence, a marginal, partial mediation of the relationship between authenticity and MIL by total basic need satisfaction was found. The second, third and fourth analyses revealed no mediation effect of respectively autonomy satisfaction, relatedness satisfaction and competence satisfaction in the relationship between authenticity and MIL. The values of the total, direct and indirect effects of all four mediation analyses are to be found in table 2.

Table 2

Results Mediation Analyses of Total Basic Need, Autonomy, Relatedness and Competence

Satisfaction in the Relationship between Authenticity and Meaning in Life

Mediator	Total effect	Direct effect	Indirect effect
Total basic need satisfaction	$b = .47*$	$b = .30$	$b = .17$, BI [-.03, .37]
Autonomy satisfaction	$b = .49*$	$b = .43*$	$b = .06.$, BI [-.15, .27]
Relatedness satisfaction	$b = .49*$	$b = .41*$	$b = .07$, BI [-.03, .21]
Competence satisfaction	$b = .49*$	$b = .41*$	$b = .08$, BI [-.04, .22]

Note: *p $< .01$

Discussion

Current study sought to connect the two existential-psychological concepts of authenticity and MIL and interpret these concepts within the theoretical framework of SDT. Research has shown the relationship between these concepts and their intertwinement with SDT's basic psychological needs (e.g., Martela et al., 2018; Moisseron-Baudé et al., 2022; Ryan & Deci, 2017; Thomaes et al., 2017). Here, the relationship between authenticity and MIL and the mediating role of SDT's basic needs were investigated.

First, it was hypothesized that each of the three basic psychological needs would independently contribute positively to MIL (Martela et al., 2018). Contrary to the expectations, current study found no significant contribution of the basic psychological needs separately to MIL. It did find a small but significant contribution of the basic psychological needs combined to MIL. Ryan & Deci (2017) stated that an individual's sense of meaning is largely accounted for the degree to which this individual is satisfied in his basic psychological needs (see also Martela et al., 2018). Therefore, the absence of a contribution of the basic psychological needs

separately and the comparatively small contribution of the basic needs combined to MIL in the current study is surprising.

The second hypothesis was that authenticity is positively related to MIL. Moisseron-Baudé and colleagues (2022) found that all three authenticity subscales were associated with presence of meaning, hence the association between authenticity and MIL was expected. Both correlational and PROCESS analyses in the current study indeed showed a significant moderate positive association between authenticity and MIL. Hence, in line with the expectations, authenticity and MIL were found to be positively related.

The third hypothesis aimed at investigating whether total basic psychological need satisfaction, as well as every basic need separately, mediates the relationship between authenticity and MIL (Kernis & Goldman, 2006; Thomaes et al., 2017). With significance levels very close to $p <.05$ level significance, a marginally significant partial mediation was found of total basic need satisfaction in the relationship between authenticity and MIL. No separate basic need was found to mediate the relationship between authenticity and MIL. Given that authenticity and MIL are related and are both stated to be facilitated by SDT's basic needs (Kernis & Goldman, 2006; Ryan & Deci, 2017), the absence of a mediation of the separate basic needs in the relationship between authenticity and MIL is surprising. Further, given the tight link between authenticity and autonomy (Thomaes et al., 2017), especially the absence of a mediation of autonomy satisfaction in the relationship between authenticity and MIL is surprising.

Current study's results generally contradict findings of other studies (e.g., Ryan & Deci, 2017; Martela et al., 2018, Thomaes et al., 2017). The contribution of the basic needs combined to MIL is small compared to other studies (only 11%, whereas Martela and Steger found that the basic needs, including a fourth factor called 'beneficence', explained 61% of the variance in MIL). Further, the separate basic needs do not contribute to MIL, explaining the absence of

a mediation by relatedness satisfaction, competence satisfaction and, despite its tight link with authenticity (Thomaes et al., 2017), autonomy satisfaction in the relationship between authenticity and MIL. One explanation could be related to the sample used. Data collection was done in the social circle of the main author, which is expected to consist of a relatively high number of participants with Christian beliefs. Many studies show that religiousness is positively associated with MIL (e.g., Jung, 2015; Krok, 2015; Robbins & Francis, 2000; Steger & Frazier, 2005). Therefore participants' religiousness could also explain the variance in MIL, independent of basic psychological need satisfaction. Perhaps religious people are more inclined to experience meaning merely because of their beliefs, thus independent of basic psychological need satisfaction. Here, we can return to a classic work of existential literature already mentioned: *Man's Search for Meaning* by Viktor Frankl (1963). As the religious person Frankl was, he was able to subtract a deep meaning in his life, even in his prison time at the Nazi extermination camp Auschwitz. Despite being immensely frustrated in his basic psychological needs of autonomy, relatedness and competence, he was able to withstand the suffering he had to undergo, due to experiencing a clear meaning in his life. People's religious beliefs could play a role in the relationship between basic psychological need satisfaction and MIL. To investigate this, further research could test the contribution of basic psychological needs to MIL while controlling for religious beliefs. A questionnaire on religiosity should be administered and the data included in the regression model, with MIL as outcome variable and the basic needs and religiosity as predictor variables. In this manner, the role of religious beliefs in the contribution of basic psychological need satisfaction to MIL can be investigated.

Yet, Frankl did not specifically state that it were his religious beliefs that provided him meaning. Rather, he stated that he was able to rise above the situation because he identified a clear vision for his future, which transcended the pain and suffering he had to endure in his time at Auschwitz (Frankl, 1963; Wong, 2021). Naming this 'self-transcendence', Frankl (1966)

focused on the transcendental element that provided him meaning, which is not dependent on literal religious beliefs, as posited by Wulff (1991; 1997) and Duriez, Dezutter, Neyrinck and Hutsebaut (2007). Wulff posited a model of four different religious attitudes on a two dimensional scale: Inclusion of Transcendence vs. Exclusion of Transcendence and Literal belief vs. Symbolic belief. Including transcendence, two kinds of religious attitudes emerge: literal inclusion of transcendence (Orthodoxy) and symbolic inclusion of transcendence (Second Naïveté). This Second Naïveté allows for meaning and transcendence independent of an actual belief in a religious reality. It may be that not the literal content of the religious belief, but rather the inclusion of transcendence is that which provides people with meaning, independent of momentary basic need satisfaction. In this manner, in line with Frankl (1963; 1966) and Wulff (1991; 1997), the inclusion of transcendence would allow for a meaning providing framework, which can function as a buffer against basic need frustration. To investigate this in further research, we propose to administer the Presence of Meaning scale of the MLQ and the Post-Critical Belief Scale (Duriez, Fontaine, & Hutsebaut, 2000) and subsequently investigate the relationship between MIL and the tendency to include transcendence in one's religious attitude. Such research could shine a light on the meaning proving value of transcendence in one's belief system.

Limitations and further research

Certain limitations should be taken into account when interpreting the results of this study. First, the cross-sectional design used in this study does not allow to infer conclusions about the direction or causality of the observed relations. This means that from current study's finding that authenticity and MIL are related, it cannot be known whether authenticity causes MIL or MIL causes authenticity. The possibilities of applying a longitudinal or experimental design to investigate the relationship between authenticity and MIL should be examined. For instance, meaning-enhancing interventions could be applied to subsequently observe

differences in authenticity, ultimately to infer conclusions about the direction of the relationship between authenticity and MIL.

A second limitation concerns the data collection procedure. Consisting of 158 participants, the sample size was relatively small. The fact that only a marginal partial mediation of total basic need satisfaction in the relationship between authenticity and MIL was found, could possibly be explained by the small sample size, as a bigger sample size could have revealed a stronger mediation effect. Further, data collection was done with a convenience sample in the social circle of the main author. Therefore, the sample could be non-representative (Neuman, 2014). The participants had an average age of $M = 34.55$ with ages ranging from 18-71, which is reasonably representative compared to the average age of the Dutch population (41.6 in 2017). The sample was non-representative regarding sex, because there were more women (60,1%) than men (39,9%). Regarding educational level, the sample was not representative: almost 75% of participants had a degree on the level of applied sciences or higher, which in 2019 only applied to 41% of the Dutch population (Centraal Bureau voor de Statistiek, 2020). Lastly, like already noted, the sample is expected to be non-representative regarding religious beliefs. In further research, a randomized sample is recommended.

A third limitation concerns the measures used. Self-report is used, reducing the study's validity due to possible larger measurement errors (Field, 2013). Moreover, a validated Dutch translation of the Authenticity Scale (Wood et al., 2008) was unavailable, instigating the use of a back translated Dutch version. Next to this, there was no literature regarding the psychometric properties of the Dutch version of the MLQ. The use of validated questionnaires is recommended, while preserving full anonymity for the participants to minimize measurement errors due to social desirability.

Clinical and societal relevance

Research to meaning in life has gained increased attention in recent years, not in the least because abundant scholars labeled the incidence of meaninglessness as 'one of the biggest threats of our era' (Frankl, 1963; Oakley, 2010; Vanhooren, 2019; Vervaeke, Mastropietro, & Miscevic, 2017; Yalom, 2020). To combat this threat, Frankl stressed the importance of finding meaning in life, which cannot be a generalized one, but should be personal and authentic (1963). The search for and encounter with one's authentic meaning in life in the therapeutic context can bring about a positive change in the patient, not seldom alleviating psychopathology. Fortems, Dezutter, Dewitte and Vanhooren (2021) argue for the focus on meaning in psychotherapy, as they show that meaning in life mediates between the therapeutic relationship and therapy outcome. They state that meaning in life might be at the core of Rogerian therapies, signifying the important therapeutical role that meaning has. Along these lines, Carl Rogers posited that one of the basic attitudes a therapist should apply is 'congruence'. Essentially, this entails that the therapist should stimulate the patient to be authentic by being authentic himself (1951). In addition, focusing on that which a patient finds meaningful stimulates the patient to be authentic. This corresponds to Yalom's existential needs of Freedom and Meaning (2020), for the patient is stimulated to search for the meaning in his life in an autonomous and authentic manner. This demonstrates the relevance of and the connection between authenticity and meaning in life in psychotherapy.

Current research suggests that basic psychological need satisfaction only plays a minor role in providing meaning in life. In other words, it suggests that regarding meaning, there is more than only basic psychological need satisfaction. Given this, it is recommended to grant the concept of meaning a prominent role in psychotherapy. Meaning-oriented therapy creates the space for therapist and patient to explore together what it is that makes the life of a patient meaningful, beyond basic psychological need satisfaction. Thus, we recommend granting the

authentic quest to an individual's meaning in life, or as Frankl would put it 'the fundamental striving of human beings' (1972), the status that it deserves in psychotherapy.

Conclusion

Current study investigated the relationship between authenticity, meaning in life and the underlying role of SDT's basic psychological needs. Authenticity was found to be positively related to meaning in life. Further, it was found that the basic psychological needs separately did not contribute to meaning in life nor mediated the relationship between authenticity and meaning in life. The basic needs combined were responsible for a small contribution to meaning in life and a marginal partial mediation of the relationship between authenticity and meaning in life. Given that the current study suggests that there is more to meaning in life than basic psychological need satisfaction, more research into the relationship between the basic needs, authenticity and meaning in life is desirable, with the possible addition of religious beliefs as a variable. This could further elaborate on the concept of meaning in life above and beyond satisfaction of basic psychological needs. The beneficial psychological consequences that meaning in life brings, should mark the concept as a crucial element of psychotherapy.

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