Journal of Counseling Psychology

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Online First Publication, June 2, 2025. https://dx.doi.org/10.1037/cou0000801

AMERICAN PSYCHOLOGICAL ASSOCIATION

Journal of Counseling Psychology

ISSN: 0022-0167

https://doi.org/10.1037/cou0000801

Are the Dimensions of Meaning in Life Distinct? A Bifactor Model of Comprehension, Purpose, and Mattering With Four Samples

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In recent years, the tripartite conceptualization of meaning in life (MIL) including (a) coherence/comprehension, (b) purpose, and (c) significance/mattering has received growing scholarly consensus and some support from factor analytic findings. However, a considerable body of studies has shown that the three MIL dimensions are highly correlated, suggesting the potential for MIL's unidimensionality. Therefore, the purpose of this study was to investigate whether a bifactor model, compared to other plausible models, best explained the relations among three MIL dimensions, namely, comprehension, purpose, and mattering. Using four different samples ($4{,}041_{T1}$ and $2{,}717_{T2}$ midlife adults, 610 adults, 956 college students, and 346 patients with chronic illnesses), results indicated that the bifactor model best fit the data, compared to the unidimensional model and the correlated three-factor model. The bifactor model provided evidence for an overarching MIL factor. Ancillary bifactor indices favored the unidimensionality of MIL. The findings provide conceptual, measurement, and practical implications for MIL researchers and practitioners.

Public Significance Statement

This study found that the three dimensions of meaning in life, including comprehension, purpose, and mattering, reflect the same underlying experience across four samples. This finding provides implications for future research and interventions focused on promoting people's meaning in life.

Keywords: meaning in life, dimensions, bifactor analysis, the midlife in the United States study

Since the publication of Viktor Frankl's (1992) seminal book, *Man's Search for Meaning*, psychology researchers have examined the vital human experience of meaning in life (hereafter referred to as "MIL"). Decades of research findings have consistently shown the multifaceted benefits of the presence of MIL, such as better physical health (Czekierda et al., 2017; Guerrero-Torrelles et al., 2017), better well-being (Glaw et al., 2017; J. B. Li, Dou, et al., 2021), and buffering against anxiety and depressive symptoms (P. F. J. Li et al., 2019, 2024). Recently, there has been a growing scholarly consensus on the tripartite conceptualization of MIL that includes three distinguishable dimensions, namely, coherence/comprehension, purpose, and significance/mattering (George & Park, 2016; Heintzelman & King, 2014; Martela & Steger, 2016). Conceptually, comprehension has been understood as one's "sense of coherence and understanding regarding their lives" (George & Park, 2016, p. 206), which is defined "identically" as coherence (Martela & Steger, 2023, p. 606). Purpose is regarded as one's experience of being directed and motivated by valued life goals (George & Park, 2016; Martela & Steger, 2016). Further, significance is known as one's "sense of life's inherent value and having a life worth living" (Martela & Steger, 2016, p. 534), whereas mattering is conceptualized as one's feeling that their existence is of significance, importance, and value in the world (George & Park, 2016). Despite such a conceptual advance, researchers have not achieved a full understanding of MIL (King & Hicks, 2021). Indeed, a considerable body of correlational research has indicated high correlations among the three MIL dimensions, raising the possibility of MIL's unidimensionality. In response to calls from scholars for more empirical research into the relationships among the dimensions of MIL—specifically, their degree of association or independence—this study utilized four samples to test three MIL dimensions, namely, comprehension, purpose, and mattering,[1] within a bifactor framework. Additionally, we examined ancillary bifactor indices to assess the dimensionality of MIL.

William Ming Liu served as action editor.

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This study was funded by John D. and Catherine T. MacArthur Foundation, National Institute on Aging.

P. F. Jonah Li played a lead role in conceptualization, data curation, formal analysis, methodology, software, writing–original draft, and writing–review and editing. Dubravka Svetina Valdivia played a supporting role in data curation and writing–review and editing. Y. Joel Wong played a supporting role in writing–review and editing.

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[1] Due to the archival nature of our data sets, we did not have access to the Three-Dimensional Meaning in Life (3DM) Scale (Martela & Steger, 2023).

Relevance to Counseling Psychology

This study's focus on MIL is relevant to the field of counseling psychology for three reasons. First, MIL as a positive psychological construct is of core interest to counseling psychologists because "positive psychology appears to have a natural home within counseling psychology" (Magyar-Moe et al., 2015, p. 494). MIL taps into people's strengths and optimal functioning (Steger et al., 2006; P. F. J. Li, Wong, Granderson, et al., 2022)—core values of counseling psychology (Lichtenberg et al., 2018). Despite its key role, MIL has received scant research attention in counseling psychology. Indeed, a content analysis indicated that MIL only appeared thrice in the list of variables studied in flagship journals of the field of counseling psychology, including *Journal of Counseling Psychology*, from 2004 to 2014 (Magyar-Moe et al., 2015). Hence, our study contributes to this literature gap by investigating the dimensions of MIL.

Second, MIL is relevant to theories in counseling psychology. Existing theoretical approaches in counseling psychology that explicitly address MIL (Hill, 2018) include logotherapy (Frankl, 1992), existential psychotherapy (Yalom, 1980), and acceptance and commitment therapy (ACT; Hayes & Pierson, 2005). Logotherapy is a spiritually oriented psychotherapy approach to MIL, which assumes that the primary motivation for humans is to search for MIL (Frankl, 1992), whereas existential psychotherapy is an existential dynamic approach to MIL, which contends that humans have a strong need to find MIL in a meaningless world (Yalom, 1980). Further, ACT is a cognitive-behavioral therapeutic approach that helps clients develop, clarify, and pursue their MIL by living congruently with their values (Hayes & Pierson, 2005). While these theories differ in their philosophical assumptions of human experiences and the sources of MIL, they share the commonality of explaining and improving human conditions (Drapela, 1990), including (a) offering a framework to make sense of people's lived experiences (comprehension), (b) outlining possible long-term goal pursuits (purpose), (c) considering one's life value to the world (mattering), and (d) promoting meaningful living.

Third, MIL relates to the psychotherapy practice in counseling psychology. According to some estimates, about a fifth to one third of clients' concerns in psychotherapy are tied to a lack of MIL (see Hill et al., 2017, for a review). Counseling psychologists have pointed out that MIL concerns both the process and outcome of psychotherapy. Regarding psychotherapy process, counseling has been viewed as "a process for meaning making where clients and counselors actively interpret and construct meaning" (Strong et al., 2008, p. 117). Further, MIL dimensions, including comprehension, have been understood as common, humanistic factors in psychotherapy (Wampold, 2012). As for psychotherapy outcome, Heppner et al. (2016) wrote, "so much of the field of counseling is … discovering new techniques for helping people lead… more meaningful lives" (p. xvi). Similarly, Wachtel (2011) stated, "when successful, psychotherapy … enables [clients] to give different meaning to events and experiences that had previously been a source of hopelessness and blockage and had contributed to a demeaning or depressing view of [themselves] and of [their] life" (p. 27).

The Dimensions of MIL

MIL has been conceptualized in many ways (George & Park, 2016; Martela & Steger, 2016), one of which is a unidimensional perspective that views it as a singular, overarching construct. To illustrate, Frankl (1992) used terms such as MIL and purpose synonymously, discussing how purpose and MIL engender one's resilience in challenging times (P. F. J. Li & Wong, 2024; P. F. J. Li, Wong, & McDermott, 2021). Similarly, C. D. Ryff and Singer (1998) asserted that experiencing purpose means "feeling that there is meaning in one's present and past life" (p. 707). Also, Reker and Wong (1988) used MIL and purpose interchangeably in their writings. Other scholars, such as Bering (2002) and Emmons (2003), defined MIL as significant. Building upon the unidimensional perspective, Steger (2009) proposed a two-dimensional approach, conceptualizing MIL as "the extent to which people comprehend, make sense of, or see significance in their lives, accompanied by the degree to which they perceive themselves to have a purpose, mission, or overarching aim in life" (p. 682). This conceptualization theorizes MIL as comprising comprehension (a cognitive component) and purpose (a motivational component).

However, over the past decade, there has been a growing scholarly consensus on the three-dimensional perspective of MIL[2] (George & Park, 2016; Heintzelman & King, 2014; King & Hicks, 2021; Martela & Steger, 2016). These three dimensions include (a) coherence or comprehension, (b) purpose, and (c) significance or mattering.

Factor Structures of MIL

To empirically assess the above conceptualizations of MIL, several factor structures have been tested, including single-factor structures (see Panel A of Figure 1), correlated multifactor structures (see Panel B of Figure 1), and, more recently, bifactor structures (see Figure 2). The single-factor structure[3] has been employed to assess the unidimensionality of MIL. In single-factor structures, each indicator of the construct loads onto a single factor. Some widely used scales, such as the Presence subscale of the Meaning in Life Questionnaire (Steger et al., 2006), the Purpose subscale of the Psychological Well-Being Scale (C. D. Ryff, 1989), and the Purpose in Life Test (Crumbaugh & Maholick, 1964), assess MIL unidimensionally, deriving a single, overall score for MIL.

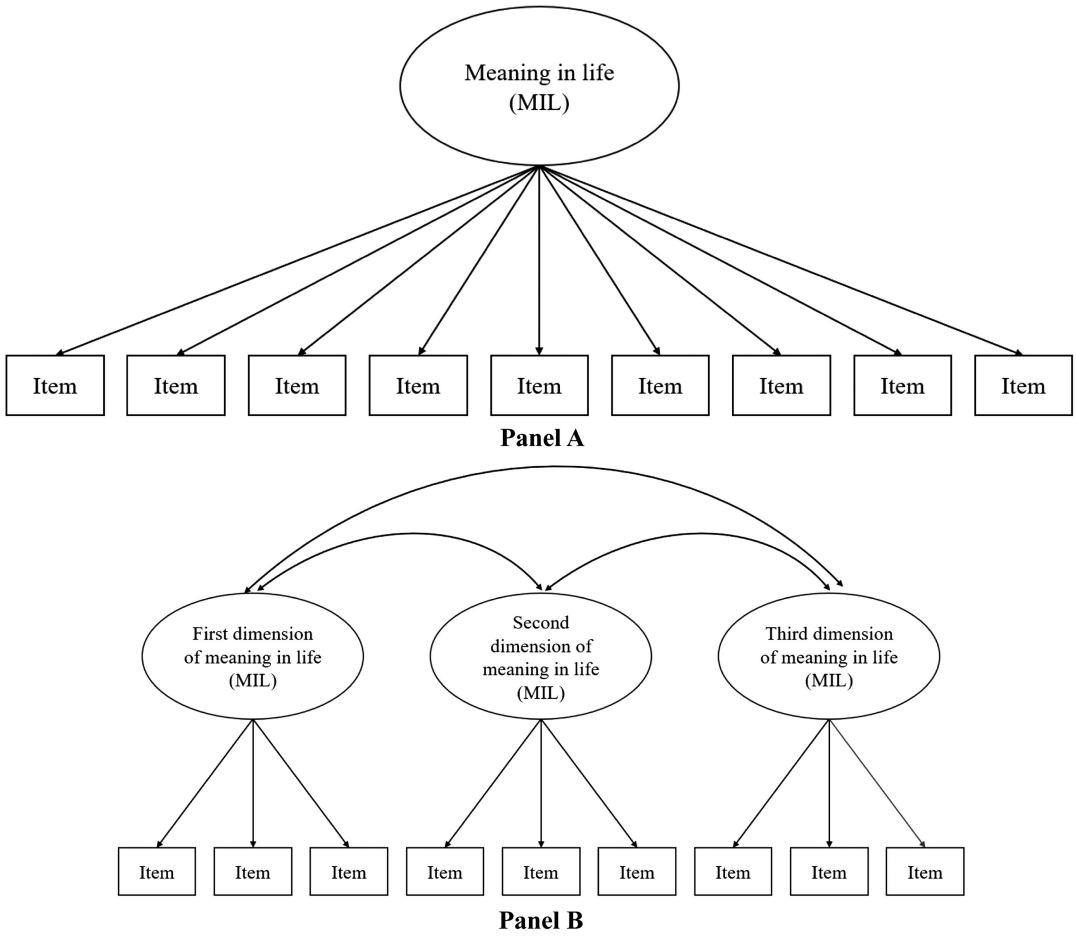
In later years, researchers developed other measures to assess MIL multidimensionally using correlated multifactor structures. The correlated multifactor structure contains multiple specific factors, which are allowed to correlate with one another, while observed indicators load on one specific factor. One example is the Life Regard Index-Revised (Debats, 1998), which was modeled with a correlated two-factor structure, involving one's framework for living and sense of fulfillment. Another example is the Meaningful Life Measure (Morgan & Farsides, 2009), which was modeled with five correlated factors, including purposeful life,

[2] We are aware of other proposed dimensions of MIL, such as self-transcendence (P. F. J. Li, Wong, Granderson, et al., 2022; Wong, 2017), internal value (Z. Li, Liu et al., 2021), reflectivity (Hill et al., 2019), experiential appreciation and affect (Kim et al., 2022). Given the growing scholarly consensus, we limit our scope to the three-dimensional perspective of MIL.

[3] We note that while the Presence subscale of the Meaning in Life Questionnaire (Steger et al., 2006) and the Purpose subscale of the Psychological Well-Being Scale (C. D. Ryff, 1989) are unidimensional, their full scale is multidimensional and contains other subscales.

Figure 1

The Single-Factor Structure and the Correlated Factor Structure of MIL



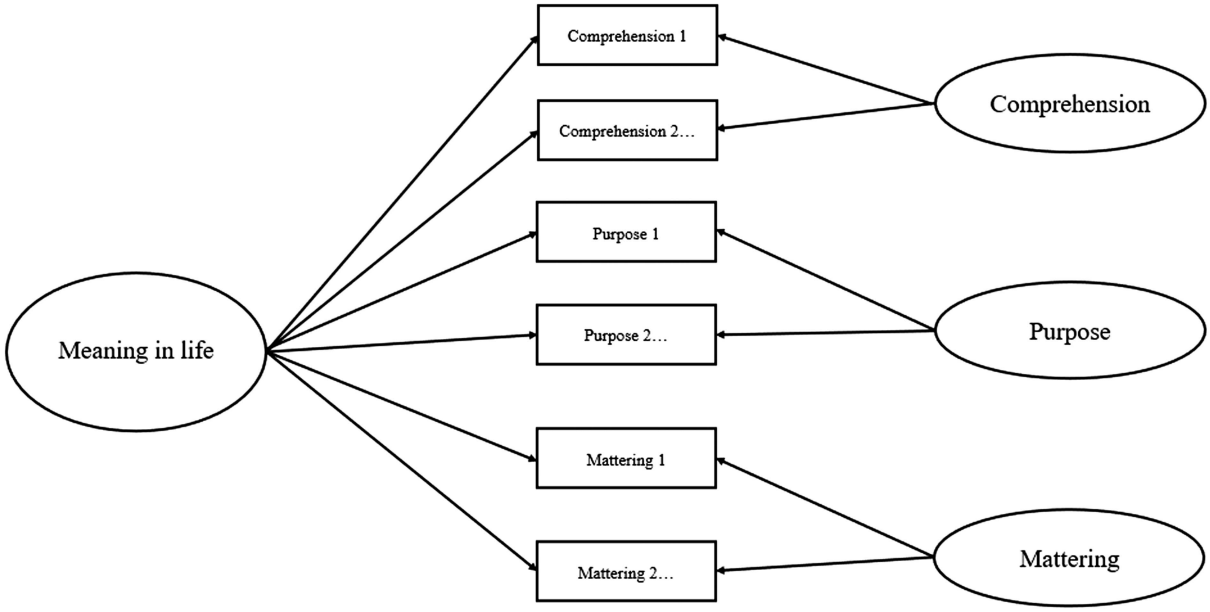
Note. Panel A depicts the single-factor structure of MIL, whereas Panel B showcases the correlated three-factor model.

principled life, valued life, exciting life, and accomplished life. To assess the three dimensions of MIL, factor analytic findings have favored a correlated three-factor structure. Based on their tripartite conceptualization of MIL (George & Park, 2016), George and Park (2017), confirmatory factor analytic findings (CFAs) have shown support for the three-correlated factor structure in their Multidimensional Existential Meaning Scale (George & Park, 2017), which assesses one's comprehension, purpose, and mattering. Similarly, Martela and Steger (2023) CFAs have provided support for the three-correlated factor structure in their Three-Dimensional Meaning in Life (3DM) Scale, which measures one's coherence, purpose, and significance. Other factor analytic findings have also shown support for the correlated multifactor structure regarding these MIL dimensions (Costin & Vignoles, 2020; Gerymski & Krok, 2020; Kim et al., 2022; Z. Li, Liu, et al., 2021; Marco et al., 2022; Valdivia & Li, 2022). By contrast, Hill et al.'s (2019) analysis of the Meaning in Life Measure found support for a correlated two-factor structure, but not a correlated three-factor structure, which includes the Reflectivity subscale and the Experience subscale (with the Experience subscale lumping items of coherence/comprehension, purpose, and significance/mattering into one single factor).

Only a handful of studies have used bifactor modeling to assess MIL dimensions.[4] In the bifactor model, items load onto their corresponding specific factor and a general factor, and specific factors are assumed to be orthogonal (i.e., uncorrelated) with the general factor (Rodriguez et al., 2016). A key benefit of bifactor modeling is identifying and disaggregating the unique variance explained by specific factors and a general factor (Reise, 2012). One particular advantage of the bifactor model compared to the correlated multifactor model is that researchers can compute ancillary bifactor indices to determine the most appropriate interpretation of a scale's dimensionality and its model-based reliability of the overall and subscale scores (Rodriguez et al., 2016). An example of a bifactor model is the Situational Meaning in Life Evaluation

[4] We acknowledge a few studies that used the bifactor model to assess other dimensions of MIL, such as presence of and search for MIL (Damásio et al., 2016; Stalikas et al., 2018). We limit our scope to discussing studies that addressed the three dimensions of MIL.

Figure 2
The Bifactor Model for Meaning in Life



Note. The bifactor model for meaning in life. The items of each subscale vary based on the samples (see the Measures section).

(Zambelli & Tagliabue, 2024), which used Italian representative samples and found that the bifactor model[5] was a good fit for the data. As another example, P. F. J. Li, Wong, McCullough, et al. (2022) developed the Existential Meaninglessness Scale and found the bifactor structure[6] fit the data best, compared to the correlated three-factor structures and second-order structures. P. F. J. Li, Wong, Granderson, et al. (2022) found that ancillary bifactor indices favored the unidimensionality of the scale.

Unresolved Questions on the Dimensionality of MIL

A considerable body of studies has provided empirical evidence that the three MIL dimensions are highly correlated. For example, purpose was strongly correlated with comprehension (r = .70–.84; Gawda & Korniluk, 2024; Geroge & Park, 2017; Gerymski & Krok, 2020; P. F. J. Li, Wong, Granderson, et al., 2022; P. F. J. Li, 2024; Martela & Steger, 2023; Świątek et al., 2023; Zambelli & Tagliabue, 2024), coherence (r = .72–.83; Costin & Vignoles, 2020, 2022; Martela & Steger, 2023), mattering (r = .68–.83; Costin & Vignoles, 2020, 2022; Geroge & Park, 2017; Gerymski & Krok, 2020; Martela & Steger, 2023; Świątek et al., 2023), and significance (r = .79–.82; Martela & Steger, 2023; Zambelli & Tagliabue, 2024). Further, comprehension was strongly correlated with mattering (r = .68–.82; Gawda & Korniluk, 2024; George & Park, 2017; Gerymski & Krok, 2020; Martela & Steger, 2023; Świątek et al., 2023) and significance (r = .89–.90; Martela & Steger, 2023; Zambelli & Tagliabue, 2024). Furthermore, coherence was strongly correlated with mattering (r = .68–.77; Costin & Vignoles, 2022) and significance (r = .75; Martela & Steger, 2023). In summary, although researchers have made theoretical distinctions among the MIL dimensions (George & Park, 2016; King & Hicks, 2021; Martela & Steger, 2016), a considerable amount of empirical evidence from correlational research has demonstrated that the three MIL dimensions are highly correlated, suggesting the potential of unidimensionality among the constructs.

Despite the advantages of the bifactor model, scholars have not fully utilized it to clarify the dimensionality and interrelationships among the dimensions of MIL. Indeed, scholars have called for more research to gain a deeper understanding of the extent to which comprehension, purpose, and mattering are related or function independently (George & Park, 2016; Martela & Steger, 2023). Given the high correlations among comprehension, purpose, and mattering, George and Park (2017) encouraged "future research that examines the factor structure and validity of the scale" (p. 12). In the same vein, Martela and Steger (2023) called "for more research to examine the potentially hierarchical structure [e.g., bifactor structures] of meaning in life" (p. 622).

The Present Study

Against this backdrop, the present study sought to examine whether the tripartite MIL dimensions (i.e., comprehension,

[5] We note that Zambelli and Tagliabue (2024) did not calculate ancillary bifactor indices to clarify the dimensionality and reliability of their scale; they also grouped comprehension, significance, and purpose into a specific factor. Additionally, despite the good fit of the bifactor model to the data, the authors dropped the bifactor model and proceeded with a more parsimonious correlated two-factor model to maintain a theoretical structure.

[6] We note that P. F. J. Li, Wong, McCullough, et al., 2022 assessed the absence of MIL (i.e., incomprehension, purposelessness, and insignificance) instead of the presence of MIL. Their Tripartite Model for Existential Meaninglessness was inspired by the tripartite approach to MIL (George & Park, 2016; Heintzelman & King, 2014; King & Hicks, 2021; Martela & Steger, 2016).

purpose, and mattering; George & Park, 2016; King & Hicks, 2021) are best represented by a bifactor model, with a strong MIL overarching factor alongside the three dimensions. As mentioned before, existing correlational findings have suggested that the three MIL dimensions may tap into a single, overarching MIL factor. This specifically suggests that the three MIL dimensions may fit together within a bifactor structure (see Figure 2). In the bifactor model, each indicator loads onto both the general factor and its specific factor (Reise et al., 2013). Put differently, each indicator corresponds to both its unique MIL dimension (e.g., purpose) and the overall MIL (e.g., the overarching factor). In this study, we proposed two hypotheses. Our first hypothesis (Hypothesis 1) was that, compared to other models (e.g., unidimensional models and correlated three-factor models), the bifactor model would fit the data best. For our second hypothesis (Hypothesis 2), we predicted that the bifactor indices would indicate strong support for the unidimensionality of the three MIL dimensions.

Method

Participants and Procedure

To examine our research hypotheses, we included four samples for several reasons. First, using multiple samples can increase the generalizability of results. Indeed, recent reviews of research methods in positive psychology have recommended "repeating the examinations with more representative samples … for increasing the generalizability of results" (Helwig et al., 2020, p. 10). Second, the inclusion of multiple samples affords the examination of the pattern of results by comparing findings among sample groups, which increases the robustness of our study's conclusions. Similarly, using samples across time points enables the integration of cross-sectional insights with longitudinal data (e.g., midlife adults across two time points), deepening the scope of our findings. Third, the use of multiple samples promotes external validity by reducing the risk of drawing conclusions that only apply to a homogeneous group, such as college students (Helwig et al., 2020). In this regard, we adopted multiple samples to answer MIL researchers' calls to assess MIL with "larger, non-undergraduate samples" (George & Park, 2017, p. 12) and a variety of samples such as "every day" populations and people dealing with challenges, such as patients with chronic illnesses[7] (George & Park, 2013, p. 373). Indeed, people who live with chronic illnesses might be particularly interested in MIL concerns because of heightened awareness of their mortality and as a means of making sense of their suffering (P. F. J. Li, Wong, Granderson, et al., 2022). Hence, we included four samples: (a) a nationally representative sample of midlife adults with two timepoints (Sample 1), a convenience sample of adults (Sample 2), a convenience sample of college students (Sample 3), and a convenience sample of patients with chronic illnesses (Sample 4). Each sample is described next.

Sample 1: 4,041$_{T1}$ and 2,717$_{T2}$ Midlife Adults

The first sample was drawn from the Midlife in the United States (MIDUS) study–a national longitudinal study of health and well-being (Radler, 2014). Participants in the MIDUS study were recruited through a nationally representative Random Digit Dialing method–a probability sampling method and provided informed written consent. The MIDUS began in 1995 with a survey of non-institutionalized, English-speaking, American adults (MIDUS Wave I, 1995–1996). After the MIDUS Wave I, follow-up surveys were administered, with an average follow-up interval of nine years (MIDUS Wave II, in 2004–2006; C. Ryff et al., 2017; MIDUS Wave III, in 2013–2014; C. Ryff et al., 2019). In this study, we only included participants from the MIDUS Waves II, and III, because the coefficient α of the Purpose subscale of the Psychological Well-Being Scale (C. D. Ryff, 1989) at MIDUS Wave I was inadequate (α = .36).

At MIDUS Wave II, (2004–2006), 4,041 participants, who participated in MIDUS Waves I, continued their participation and completed the self-administered questionnaires (Sample 1_{T1}). Participants ranged in age from 30 to 84 years (M_{age} = 56.23, SD_{age} = 12.39). Of this sample, most participants self-identified as White American (90%), followed by African American (4%), other racial backgrounds (e.g., Asian American and Native American; 3%).[8] For gender, participants self-identified as female (55%) and male (45%). At MIDUS Wave III, (2013–2014), 2,717 participants, who participated in MIDUS Waves I and II, continued their participation and completed the self-administered questionnaires (Sample 1_{T2}). Participants ranged in age from 30 to 84 years (M_{age} = 55.52, SD_{age} = 11.21). Of this sample, most participants self-identified as White American (86%), followed by African American (3%), other racial backgrounds (e.g., Asian American and Native American; 2%)[7]. For gender, participants self-identified as female (53%) and male (41%).

Sample 2: 610 Adults

The second sample included adults who participated in a project that examined MIL. After receiving approval from the institutional review board, we collected data with an anonymous online survey using Amazon Mechanical Turk. Participants were compensated USD $1 for completing the survey. We removed participants who failed at least one of the three attention checks, resulting in 610 participants. Most participants' age ranged from 25 to 34 years (50%), followed by the range from 35 to 44 years (21%), from 45 to 54 years (11%), from 55 to 64 years (8%), from 18 to 24 years (6%), and from 65 to 74 years (3%). Regarding race, most participants self-identified as White American (69%), followed by Asian American (15%), African American (7%), Hispanic American (6%), Native American (2%), and other backgrounds (1%). As for gender, most participants self-identified as male (58%), followed by female (41%) and other gender identities (1%).

Sample 3: 956 Students

The third sample comprised college students who participated in a project that examined MIL. After receiving approval from the institutional review board, data were collected using an anonymous online survey from psychology college students at a U.S. Southwestern public university. Participants received psychology course credits for completing the study; 956 participants' age ranged from 18 to 53 years (M_{age} = 19.94, SD_{age} = 2.78). For race, a portion of participants self-identified as White American (41%), followed by Hispanic American (25%), African American (17%), Asian American (10%), and other

[7] We included patients with chronic illnesses as the Centers for Disease Control and Prevention have indicated that 54% of the adults in the U.S. reported having at least one chronic condition (Watson et al., 2022).

[8] Percentage did not round up to 100% due to missing data.

racial backgrounds (e.g., Pacific Islander, Native American, 7%). Regarding gender, most participants identified as female (75%), with the remaining identified as male (24%) and other gender identities (e.g., nonconforming, 1%).

Sample 4: 346 Patients

The fourth sample involved 346 patients with chronic illnesses. Upon receiving approval from the institutional review board, we collected data via an online survey using Amazon Mechanical Turk. Each participant who provided consent and completed the survey was compensated $0.5 USD. Participants' age ranged from 18 to 79 years (M_{age} = 36.02, SD_{age} = 12.68). For race, most participants self-identified as White American (58%), followed by Asian American (17%), African American (6%), Hispanic American (6%), and other racial backgrounds (e.g., multiracial, 13%). Most of them identified as female (55%), with the remaining identified as male (44%) and other gender identities (e.g., transgender, 1%). Most participants self-reported experiencing chronic pain (23%), followed by mood disorders (19%), gastrointestinal illnesses (9.5%), bone-related diseases (8.7%), cancer (8.4%), and other illnesses (31.5%).

Measures

Comprehension, Purpose, and Mattering for Sample 1

We used the seven-item Purpose subscale of the Psychological Well-Being scale (C. D. Ryff, 1989) to assess purpose (e.g., "I have a sense of direction and purpose in life"). Following Fitzke et al. (2021), we selected two reversely scored items to assess comprehension (i.e., "The world is too complex for me" and "I cannot make sense of what's going on in the world"). According to Martela and Steger (2016), the opposite meaning of comprehension is a sense of uncertainty and incomprehensibility (p. 534). These two items denote that one is unable "to discern understandable patterns in it to make the wholeness comprehensible" (Martela & Steger, 2016, p. 533), which is symmetrical to items such as, "By and large, I am able to understand the world around me" of the Coherence subscale of the 3DM Scale (Martela & Steger, 2023) and consistent with the low coherence scenario in Martela and Steger (2023) experimental study. We used the three-item Social Contribution subscale of the Social Well-Being Scale (Keyes, 1998) to assess mattering, instead of significance (e.g., "I have something valuable to give to the world"). According to Keyes (1998), social contribution is "the evaluation of one's social value. It includes the belief that one is a vital member of society, with something of value to give to the world. … Social contribution reflects whether, and to what degree, people feel that whatever they do in the world is valued by society and contributes to the commonweal" (p. 122). We argue that Keyes (1998) Social Contribution subscale captures mattering better than significance because it "emphasizes the value of one's life to the world" instead of "the value of one's life to the individual" (Martela & Steger, 2023, p. 607). The negatively worded items reflect MIL dimensions in the *opposite* fashion (Martela & Steger, 2016, p. 534), consistent with Keyes (1998) Social Contribution subscale, C. D. Ryff (1989) Purpose subscale, and extant MIL scales using such items (e.g., the Meaning in Life Questionnaire, Steger et al., 2006; the Multidimensional Existential Meaning Scale, George & Park, 2017; the Multidimensional MIL Scale, Costin & Vignoles, 2020). For these items, participants rated on a 7-point Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). We recoded the scores and calculated an average score for the three subscales, so that higher scores indicate a higher degree of comprehension, purpose, and mattering. Evidence of construct validity of the three subscales has been found via their positive associations with meaning-making strategies (i.e., positive reappraisal) and positive affect (Fitzke et al., 2021). In this study, the coefficient αs for comprehension, purpose, and mattering were .89, .93, and .91 in Sample 1_{T1} and .67, .72, and .72 in Sample 1_{T2}.

Comprehension, Purpose, and Mattering for Samples 2–4

We used the 15-item Multidimensional Existential Meaning Scale (George & Park, 2017). Specifically, the example items include "My life makes sense" (for the five-item Comprehension subscale), "My direction in life is motivating to me" (for the five-item Purpose subscale), and "I am certain that my life is of importance" (for the five-item Mattering subscale). Participants rated on a 7-point Likert-type scale, ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Scores were averaged so that higher scores reflect higher levels of comprehension, purpose, and mattering. Evidence of construct validity has been found via their positive associations with meaning judgment and subjective well-being (George & Park, 2017). In this study, the coefficient αs for comprehension, purpose, and mattering were .89, .88, and .70 in Sample 2; .90, .92, and .87 in Sample 3; and .93, .92, and .84 in Sample 4.

Data Analytic Plan

To evaluate the models, we conducted confirmatory factor analyses (CFAs) in *Mplus* 8.3 with maximum likelihood with robust standard errors (Byrne, 2013) because it does not rely on the assumption of multivariate normality (Finney & DiStefano, 2013). We evaluated model fit using the following fit indices (Hu & Bentler, 1999), including the chi-square test (χ^2), the comparative fit index, the root-mean-square error of approximation, and standardized root-mean-square residual. While a significant χ^2 value indicates poor model fit, the test has been recognized for its oversensitivity due to a large sample size (Tabachnick & Fidell, 2013). We deemed adequate model fit when values of comparative fit index were higher than or equal to .95, values of root-mean-square error of approximation were less than or equal to .06, and values of standardized root-mean-square residual were less than or equal to .08 (Hu & Bentler, 1999). To evaluate differences between nested models, we conducted chi-square difference tests and examined differences in the Akaike (AIC) and Bayesian information criterion (BIC), with significant chi-square differences as well as smaller AIC and BIC values indicating better fit.

To assess the different structures of the MIL dimensions across our samples, we tested several competing models, including single-factor models, correlated three-factor models, and bifactor models. The best fit for the single-factor model would be all indicators loading onto the single factor, whereas for the correlated three-factor

model, the specific factors would be highly independent. The evaluation of the fit of bifactor models depends on several indices that indicate the variance of specific factors and variance of a general factor. Several indices include omega (ω), omega hierarchical (ω*H*), explained common variance (ECV), and the percentage of uncontaminated correlations (PUC, Rodriguez et al., 2016). We used an Excel-based tool to calculate the bifactor indices (Dueber, 2017). ω is a reliability statistic that reflects the proportion of the overall score's variance explained by common variance instead of error. ω*H* represents the proportion of the overall score variance explained by the general factor, with specific factors considered errors. ECV quantifies the extent to which the common variance is explained by the general factor as opposed to specific factors. PUC indicates the percentage of correlations that solely reflect variance from the general factor. According to Reise et al. (2013), when values of ω*H* are greater than .70, values of ECV of the general factor are greater than .60, and values of PUC are smaller than .80, there is strong evidence for unidimensionality.

Results

Preliminary Analyses

Prior to CFAs, we inspected missing values. Missing data on study variables were minimal (1.3% and 2.1% for Sample 1 at T1 and T2, respectively). No missing data on study variables were found in Samples 2–4. To impute missing values, we used the full-information maximum likelihood method, which has been shown to provide unbiased parameter estimates and standard errors—a method superior to listwise deletion and mean substitution (Schlomer et al., 2010).

Model Testing

To examine various models of MIL dimensions, we conducted CFAs using maximum likelihood estimator with robust standard errors. Table 1 shows the results of the CFAs. We found that the single-factor model had a poor fit to the data across our samples.

Table 1
Findings From Confirmatory Factor Analyses: Model Fit Indices and Model Comparisons

Model	*df*	χ^2	RMSEA	90% CI	CFI	SRMR	AIC	BIC
Sample 1^{T1} (4,041 midlife adults)								
1. Single-factor model	54	1,969.04***	.094	[.090, .097]	.773	.065	174,788.82	175,015.77
2. Correlated three-factor model	51	702.76***	.056	[.053, .060]	.923	.044	173,197.03	173,442.90
3. Bifactor model	42	296.27***	.039	[.035, .043]	.970	.023	172,717.25	173,019.85
Model comparison	Δdf	Δχ2	ΔRMSEA	—	ΔCFI	ΔSRMR	ΔAIC	ΔBIC
1. Correlated three-factor model versus single-factor model	3	1,266.28***	.038	–	.150	.021	1,591.79	1,572.87
2. Bifactor model versus correlated three-factor model	9	406.49***	.017	–	.047	.021	479.78	423.05
Sample 1^{T2} (2,717 midlife adults)								
1. Single-factor model	54	1,487.76***	.099	[.095, .104]	.764	.068	114,894.96	115,107.20
2. Correlated three-factor model	51	592.17***	.063	[.058, .067]	.911	.049	113,760.56	113,990.48
3. Bifactor model	42	211.50***	.039	[.034, .044]	.972	.024	113,314.37	113,597.35
Model comparison								
1. Correlated three-factor model versus single-factor model	3	895.59***	.036	–	.147	.019	1,134.40	1,116.72
2. Bifactor model versus correlated three-factor model	9	380.67***	.024	–	.061	.025	446.19	393.13
Sample 2 (610 adults)								
1. Single-factor model	90	590.36***	.095	[.088, .103]	.860	.062	26,692.74	26,891.35
2. Correlated three-factor model	87	354.10***	.071	[.063, .079]	.925	.055	26,328.95	26,540.80
3. Bifactor model	75	216.02***	.056	[.047, .064]	.960	.033	26,138.54	26,403.35
Model comparison								
1. Correlated three-factor model versus single-factor model	3	236.27***	.024	–	.065	.007	363.79	350.55
2. Bifactor model versus correlated three-factor model	12	138.08***	.015	–	.035	.022	190.41	137.45
Sample 3 (956 college students)								
1. Single-factor model	90	1,671.54***	.136	[.130, .141]	.759	.083	43,381.75	43,600.57
2. Correlated three-factor model	87	431.84***	.064	[.056, .071]	.947	.042	41,496.65	41,730.06
3. Bifactor model	75	299.83***	.056	[.049, .063]	.966	.035	41,312.22	41,603.98
Model comparison								
1. Correlated three-factor model versus single-factor model	3	1,239.70***	.072	–	.188	.041	1,885.10	1,870.51
2. Bifactor model versus correlated three-factor model	12	132.01***	.008	–	.019	.007	184.43	126.08
Sample 4 (346 patients with chronic illnesses)								
1. Single-factor model	90	442.78***	.106	[.097, .116]	.871	.055	16,674.24	16,847.33
2. Correlated three-factor model	87	209.32***	.064	[.053, .075]	.955	.042	16,325.32	16,509.95
3. Bifactor model	75	112.29***	.038	[.022, .052]	.986	.024	16,209.15	16,439.93
Model comparison								
1. Correlated three-factor model versus single-factor model	3	233.46***	.042	–	.084	.013	348.92	337.38
2. Bifactor model versus correlated three-factor model	12	97.02***	.026	–	.031	.018	116.17	70.02

Note. RMSEA = root-mean-square error of approximation; CI = 90% confidence intervals for RMSEA; CFI = comparative fit index; SRMR = standardized root-mean-square residual; AIC = Akaike information criterion; BIC = Bayesian information criterion.
*** $p < .001$.

Also, the correlated three-factor model did not fit well with the data, although this model was significantly better than the single-factor model. Notably, the bifactor model yielded adequate fit to the data across four samples (all values of comparative fit index ≥ .95, root-mean-square error of approximation ≤ .06, and standardized root-mean-square residual ≤ .08). For model comparisons, the unidimensional models were nested within the correlated three-factor models, which were, in turn, nested within the bifactor models. Results from model comparison indicated that, compared to the unidimensional and correlated three-factor models, the bifactor models had the best fit to the data. Therefore, across four samples, we found support for our first hypothesis, which supported the bifactor model for the three MIL dimensions: comprehension, purpose, and mattering (H1).

Tables 2 and 3 show the standardized factor loadings for the bifactor model across the four samples. All items significantly loaded onto the general factor with loadings in all samples. All items (except two items for Mattering among Samples 3 and 4; see Table 3) were also significantly loaded onto their corresponding factor.

Ancillary Bifactor Indices

Tables 2 and 3 show the bifactor indices. The ω for the MIL overall score suggested that 84%, 86%, 95%, 96%, and 98% of the variance in the overall score were explained by the specific factors, whereas 16%, 14%, 5%, 4%, and 2% were explained by errors in Samples 1 to 4, respectively. The ω for the specific factors ranged from .64 (for comprehension in Sample 1_{T1}) to .97 (for purpose in Sample 3). The ωH for the MIL overall score indicated that 74%, 75%, 87%, 83%, and 87% of the variance in the MIL overall score were explained by the general MIL factor in Samples 1–4, respectively. A comparison between ω (.84, .86, .95, .96, and .98) and ωH (.74, .75, .87, .83, and .87) showed that 88% (.74/.84 = .88; Sample 1_{T1}), 87% (.75/.86 = .87; Sample 1_{T2}), 92% (.87/.95 = .92; Sample 2), 86% (.83/.96 = .86; Sample 3), and 89% (.87/.98 = .89; Sample 4) of the reliable variance in the MIL overall score was explained by the general factor, with the remaining percentages (12%, 13%, 8%, 14%, and 11%) explained by the specific factors. The ωH for the specific factors ranged from .11 (for comprehension in Sample 2) to .59 (for comprehension in Sample 1_{T1}).

In Samples 1–4, respectively, the ECV values suggested that 60%, 59%, 78%, 68%, and 72% of the common variance were explained by the general factor, with the remaining 40%, 41%, 22%, 32%, and 28% being explained by the specific three factors. Finally, the PUC value was .62 for Sample 1 at T1 and T2 as well as .71 for Samples 2–4. Taken together, given that the PUC values were all less than .80, all the ECV values of the general factor were larger than or equal to .60 (except for Sample 1_{T2}, but the ECV value was very close to .60), and all the ωH values were larger than .70 in our samples, we interpret MIL as unidimensional (Reise et al., 2013). Accordingly, we found support for our second hypothesis (H2).

Discussion

The present study sought to test the bifactor structure of MIL with MIL dimensions as subfactors, namely (a) comprehension, (b) purpose, and (c) mattering using four samples, including midlife adults, adults, college students, and patients with chronic illnesses. In support of our hypotheses, we found that, compared

Table 2
Standardized Bifactor Loadings From Confirmatory Factor Analyses

Item and ancillary bifactor indices	Sample 1_{T1}: 4,041 midlife adult				Sample 1_{T2}: 2,717 midlife adult			
	G	C	P	M	G	C	P	M
Comprehension								
1. The world is too complex for me.	.44	.53			.48	.54		
2. I cannot make sense of what's going on in the world.	.45	.53			.41	.57		
Purpose								
3. I live life one day at a time and don't really think about the future.	.32		−.18		.35		−.20	
4. I have a sense of direction and purpose in life.	.51		.59		.53		.52	
5. I don't have a good sense of what it is I'm trying to accomplish in life.	.59		.36		.63		.36	
6. My daily activities often seem trivial and unimportant to me.	.56		.20		.61		.18	
7. I enjoy making plans for the future and working to make them a reality.	.49		.41		.47		.38	
8. Some people wander aimlessly through life, but I am not one of them.	.39		.46		.37		.48	
9. I sometimes feel as if I've done all there is to do in life.	.46		−.17		.55		−.25	
Mattering								
10. I have something valuable to give to the world.	.45			.38	.49			.38
11. My daily activities do not create anything worthwhile for my community.	.48			.37	.48			.34
12. I have nothing important to contribute to society.	.65			.50	.63			.62
Ancillary bifactor indices								
ω/ω*S*	.84	.64	.74	.72	.86	.67	.77	.75
ω*H*/ωHS	.74	.59	.15	.39	.75	.41	.12	.31
ECV	.60	.59	.33	.39	.59	.61	.33	.43
PUC	.62				.62			

Note. All factor loadings were significant, $p < .05$. G = general factor; C = comprehension factor; P = purpose factor; M = mattering factor; ω = omega; ω*S* = omega for the specific factor; ω*H* = omega hierarchical; ωHS = omega hierarchical for the specific factor; ECV = explained common variance; PUC = percent of uncontaminated correlations.

Table 3
Standardized Bifactor Loadings From Confirmatory Factor Analyses

Item and ancillary bifactor indices	Sample 2: 610 adult				Sample 3: 956 student				Sample 4: 346 patient			
	G	C	P	M	G	C	P	M	G	C	P	M
Comprehension												
1. My life makes sense.	.73	.35			.70	.37			.77	.19		
7. I know what my life is about.	.76	.13[b]			.71	.42			.80	.31		
8. I can make sense of the things that happen in my life.	.73	.32			.57	.48			.78	.32		
10. I understand my life.	.75	.40			.70	.54			.80	.45		
14. Looking at my life as a whole, things seem clear to me.	.75	.20			.73	.36			.84	.22		
Purpose												
3. I have aims in my life that are worth striving for.	.68		.47		.57		.54		.69		.46	
5. I have certain life goals that compel me to keep going.	.71		.24		.56		.62		.63		.64	
6. I have overarching goals that guide me in my life.	.63		.25		.60		.57		.77		.39	
9. I have goals in life that are very important to me.	.62		.56		.62		.61		.76		.43	
12. My direction in life is motivating to me.	.79		.22		.74		.43		.84		.18	
Mattering												
2[a]. There is nothing special about my existence.	−.25			.39	.66			.16[b]	.41			−.00[b]
4. Even a thousand years from now, it would still matter whether I existed or not.	.49			.61	.41			.53	.62			.41
11. Whether my life ever existed matters even in the grand scheme of the universe.	.66			.49	.65			.52	.72			.51
13. I am certain that my life is of importance.	.80			.12	.90			.15[b]	.87			.08[b]
15. Even considering how big the universe is, I can say that my life matters.	.77			.29	.83			.28	.83			.21
Ancillary bifactor indices												
ω/ω*S*	.95	.90	.89	.82	.96	.91	.92	.89	.98	.96	.97	.89
ω*H*/ωHS	.87	.11	.18	.30	.83	.26	.41	.16	.87	.22	.35	.16
ECV	.78	.14	.23	.30	.68	.29	.45	.21	.72	.24	.36	.21
PUC	.71				.71				.71			

Note. All factor loadings were significant, $p < .05$. G = general factor; C = comprehension factor; P = purpose factor; M = mattering factor; ω = omega; ω*S* = omega for the specific factor; ω*H* = omega hierarchical; ωHS = omega hierarchical for the specific factor; ECV = explained common variance; PUC = percent of uncontaminated correlations.
[a] Denotes a negatively worded item. [b] Denotes a nonsignificant factor loading.

to the single-factor and the correlated three-factor models, the bifactor model fit the data best in our four samples. This finding is consistent with recent studies on the MIL's bifactor structure (Zambelli & Tagliabue, 2024). Further, we found that ancillary bifactor indices indicated a strong unidimensional MIL factor.

Our findings contribute to a holistic perspective on MIL. While previous theoretical perspectives contend either a unidimensional (Bering, 2002; Emmons, 2003; Frankl, 1992; Reker & Wong, 1988) or a multidimensional perspective (George & Park, 2016; Heintzelman & King, 2014; King & Hicks, 2021; Martela & Steger, 2016), we found that the three MIL dimensions (comprehension, purpose, and mattering) were not independent, but commonly tapped into an overarching experience of MIL. Our findings dovetail with existing studies about well-being in which bifactor models fit the data best and consisted of a constellation of well-being indicators (Chen et al., 2013; de Bruin & du Plessis, 2015; Jovanović, 2015; Longo et al., 2016). These findings suggest that various types of well-being (e.g., subjective, social, and psychological well-being) and their indicators (e.g., affect, purpose) may reflect a broad construct of complete mental health or well-being. Similarly, findings from the present study suggest that MIL may be an underlying, unifying construct.

Implications for Theory, Research, and Practice in Counseling Psychology

Our findings provide implications for theory, research, and practice in counseling psychology. First, the bifactor structure of MIL has theoretical implications for logotherapy, existential psychotherapy, and ACT—theories in counseling psychology (Hill, 2018)—by providing a nuanced understanding of how MIL operates both globally and through specific dimensions. For logotherapy, our bifactor model aligns with Frankl's (1992) primary notion of an overarching sense of MIL—"the will to meaning" (i.e., human's inherent drive to seek MIL). Such an overarching sense of MIL also simultaneously relates to one's view of life (comprehension through attitudes), making a positive impact in the world (purpose through

creativity) and receiving from the world through interactions (mattering through experience)–components of Frankl's (1992) Meaning Triangle. With respect to existential psychotherapy, although Yalom (1980) did not specify the nuanced relations among MIL dimensions, such as MIL, coherence, purpose, and significance, and used these terms "synonymously" (p. 423), our bifactor model of MIL enhances Yalom's (1980) focus on addressing existential meaninglessness through tapping into specific "meaning-providing" experiences (p. 471), such as "discerning" (p. 474) coherent patterns in past events (achieving comprehension), doing altruistic acts (constituting purpose), and deeply engaging in life experiences (promoting mattering), while maintaining a core, stable sense of MIL. Similarly, the bifactor model of MIL dovetails with ACT's overall goal to promote clients' pursuit of MIL through living congruently with values (Hayes & Pierson, 2005; Hill, 2018). Meanwhile, this overarching sense of MIL ties to ACT's core processes including self as context (comprehension through considering social scripts one maintains about who they are and how they operate in the world), committed actions (purpose through pursuing values-aligned goals), and values clarification (mattering through recognizing one's value to the world) (Hayes & Pierson, 2005). Taken together, the bifactor structure of MIL integrates specific MIL dimensions and bridges theoretical approaches (i.e., logotherapy, existential psychotherapy, and ACT), providing a cohesive framework for understanding and fostering MIL in psychotherapy.

Additionally, our findings offer implications for research in counseling psychology, given the bifactor structure of MIL and support for a unidimensional conceptualization of MIL. First, based on the findings of our bifactor ancillary indices, we recommend that counseling psychology researchers who study MIL use the total score of the Multidimensional Existential Meaning Scale (Rodriguez et al., 2016). Second, the relatively low values of the omega hierarchical (ωH) for the specific MIL dimensions compared to the overarching MIL factor pose questions on how much practical information the subscales' scores provide aside from the total score. Our findings suggest that the subscale scores of the Multidimensional Existential Meaning Scale do not provide the most meaningful representation of the MIL construct. Hence, we urge caution in using the subscales of the Multidimensional Existential Meaning Scale. However, our findings do not preclude research on the MIL dimensions of purpose, comprehension, and mattering. Rather, we encourage researchers interested in these specific dimensions to use structural equation modeling within a bifactor framework to test the associations between these MIL dimensions and other outcomes while accounting for the MIL general factor in the model (see Hammer et al., 2018, for an example).

Moreover, our study provides practical implications in counseling psychology. In psychotherapy, many clients may state MIL as their presenting concern implicitly or explicitly (Hill, 2017). Based on our findings, we encourage mental health practitioners to consider integrative psychotherapeutic approaches to addressing MIL, such as Meaning Therapy (MT; Wong, 2010, 2015). In MT, the holistic nature of MIL is emphasized (Wong, 2010, 2015), which is consistent with our bifactor model of MIL that focuses on one's overarching sense of MIL. Recognizing the multiple facets of MIL (e.g., cognitive, motivational, behavioral, and evaluative facets), MT eclectically and flexibly incorporates techniques from logotherapy, existential-humanistic psychotherapy, cognitive-behavioral, narrative, positive psychotherapy, and cross-cultural therapies, to promote one's overarching sense of MIL (Wong, 2010). MT also includes the Purpose, Understanding, Responsibility, and Enjoyment intervention strategy which may be used to promote an overall sense of MIL (Wong, 2010, 2015): P stands for Purpose (e.g., via identifying long-term life goals), U for Understanding (e.g., via comprehending one's life experiences and events), R for Responsible Action (e.g., via pursuing acts that are congruent with values), and E for Evaluation (e.g., via evaluating one's life value to the world). Based on our bifactor analysis findings, we recommend that, when applying the Purpose, Understanding, Responsibility, and Enjoyment intervention strategy, clinicians prioritize fostering an overall sense of MIL in clients, rather than overemphasizing the distinctiveness of specific MIL components.

Strengths of the Present Study

Some strengths of this study are noteworthy. First, this study responded to scholars' call to study the interrelationships among MIL dimensions, namely, comprehension, purpose, and mattering, by testing a bifactor structure and using ancillary bifactor indices. Our findings encourage a holistic perspective on MIL, as evidenced by the unidimensionality of the MIL dimensions, which converges with the emerging studies on holistic well-being (Chen et al., 2013; de Bruin & du Plessis, 2015; Jovanović, 2015; Longo et al., 2016). Second, this study utilized multiple samples, including samples of nationally representative midlife adults (with two time points), adults, college students, and patients with chronic illnesses in the United States, to examine the dimensionality of MIL. Therefore, our findings provide some basis for generalization to the larger U.S. populations of adults, college students, and patients with chronic illnesses.

Limitations and Future Directions

We acknowledge several limitations of this study that can be addressed in future research. First, this study only examined three dimensions of meaning in life (MIL). We do not assert that our perspective is exhaustive. Rather, our emphasis on comprehension, purpose, and mattering is grounded in the recent scholarly consensus in the field of MIL (George & Park, 2016, 2017; King & Hicks, 2021). Notably, due to the archival nature of our data sets, we did not test other dimensions such as significance[9] (Martela & Steger, 2023), self-transcendence (P. F. J. Li, Wong, Granderson, et al., 2022; Wong, 2017), internal value (Z. Li, Liu, et al., 2021), reflectivity (Hill et al., 2019), experiential appreciation, and affect (Kim et al., 2022). We call for future research in this area. Second, participants in our MIDUS nationally representative sample, our adult sample, and our patient with chronic illness sample were primarily (58%–86%) White as well as participants in all of our samples were primarily male and female (about 1% gender nonconforming), which limits the generalizability of our findings to racial/ethnic and gender minorities. Finally, we relied on self-report measures to answer the research questions, which may be subjected to method and report biases. Future research should adopt diverse methods to avoid such biases, such as observer-report methods.

[9] Also, at the time of data collection of our Samples 2–4, the Three-Dimensional Meaning in Life Scale was not available (Martela & Steger, 2023).

Conclusion

To conclude, we examined the bifactor structure of the tripartite meaning in life (MIL) dimensions (i.e., comprehension, purpose, and mattering). Given that scholars have called for more research to examine the interrelations of MIL dimensions and that the correlations of three MIL dimensions are very high, our study responded to this need by exploring the factor structure of MIL. Using diverse samples (a nationally representative midlife adult sample, an adult sample, a college student sample, and a sample of patients with chronic illnesses), confirmatory factor analyses revealed that a bifactor model fit the data best compared to other competing models. The bifactor model provided evidence for an overarching MIL factor. Ancillary bifactor indices indicated the unidimensionality of the three MIL dimensions. We hope our findings will meaningfully inform the measurement of MIL and encourage future research to investigate other MIL dimensions and their factor structures.

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Received September 26, 2024
Revision received February 18, 2025
Accepted April 2, 2025 ■