



**SENTIDO DE VIDA E BEM-ESTAR SUBJETIVO: INTERAÇÕES COM
ESPERANÇA, OTIMISMO, AUTOEFICÁCIA E AUTOESTIMA EM DIFERENTES
ETAPAS DO CICLO VITAL**

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Tese de Doutorado

Universidade Federal do Rio Grande do Sul

Instituto de Psicologia

Programa de Pós-Graduação em Psicologia

Porto Alegre / RS

Outubro, 2013

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**Tese apresentada como requisito parcial para obtenção do título de doutor em
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RESUMO

A presente tese teve por objetivo avaliar diferentes aspectos do construto sentido de vida (SV) e suas relações com variáveis biossociodemográficas e outros construtos psicológicos positivos (otimismo, esperança, satisfação com a vida, felicidade subjetiva, autoestima e autoeficácia) em uma ampla amostra nacional. Para atingir os objetivos propostos, foram desenvolvidos um artigo teórico e seis artigos empíricos. O primeiro artigo apresentou o construto SV, e discutiu as potencialidades e limitações dos principais instrumentos existentes na literatura para avaliação do construto sentido de vida. Posteriormente, foram elaborados três estudos empíricos de adaptação e validação de instrumentos psicológicos para o contexto brasileiro. Os três instrumentos validados foram: 1) Questionário de Sentido de Vida (QSV); 2) Questionário de Fontes de Sentido e de Sentido de Vida (QFSSV); e 3) Escala de Felicidade Subjetiva (EFS). O quinto artigo da tese avaliou como diferentes categorias de sentido interagem com variáveis biossociodemográficas, fontes de sentido e com características psicológicas positivas. O sexto artigo investigou como o construto “busca por sentido” se relaciona com as diferentes categorias de sentido. Além disso, buscou-se compreender se a busca por sentido poderia moderar a relação entre as diferentes categorias de sentido com os índices de bem-estar subjetivo, mensurado pelos construtos satisfação com a vida e felicidade subjetiva. Por fim, o último artigo empírico investigou como diferentes características biossociodemográficas e psicológicas influenciam a intenção das pessoas em participar de futuras etapas desta pesquisa. A amostra total empregada foi de 3,034 sujeitos (63,9% mulheres), com idades variando entre 18 e 91 anos ($M = 33,9$, $DP = 15,01$), oriundos de 22 diferentes estados do Brasil. Do total da amostra, 91,4% responderam aos instrumentos em uma plataforma virtual, enquanto 8,6% o fizeram no método papel e caneta. Os três instrumentos adaptados para o contexto brasileiro apresentaram adequadas propriedades psicométricas, sugerindo sua possibilidade de uso em estudos futuros. Os resultados também demonstraram a existência de diferentes categorias de sentido de vida (realização existencial, indiferença existencial, crise existencial, conflito existencial), e que sujeitos inseridos nestas categorias apresentam importantes diferenças no que se refere a suas características biossociodemográficas e psicológicas. Foi descoberto, também, que a busca por sentido é maior entre os que apresentam conflito existencial, embora esteja positivamente relacionada com os níveis de crise existencial. Os resultados desta tese apontam para a necessidade da continuidade dos estudos acerca da temática. Esta tese pretende contribuir para a área da Psicologia Positiva ao fornecer três novos instrumentos psicométricos para uso no contexto

brasileiro, e ao apresentar resultados anteriormente não discutidos na literatura da área do sentido de vida.

Palavras-chave: Sentido de vida, Psicologia Positiva, Brasil, Psicometria, Validação, Bem-estar subjetivo.

ABSTRACT

This dissertation aimed to evaluate different aspects of the construct “meaning in life” (MIL) and its relations with sociodemographic and other positive psychological constructs (optimism, hope, life satisfaction, subjective happiness, self-esteem and self-efficacy) in a large Brazilian sample. To attain the proposed goals, one theoretical and six empirical articles were developed. The first theoretical article presented the MIL construct and discussed the benefits and limitations of the main existing scales designed to evaluate the MIL construct. Further, three validation articles of psychological measures were developed. The three questionnaires were: 1) Meaning in Life Questionnaire (MLQ); 2) Sources of Meaning and Meaning in Life Questionnaire (SoMe); and 3) Subjective Happiness Scale (SHS). The fifth article of the dissertation aimed to show how different categories of meaning interacted with sociodemographic variables, sources of meaning and positive psychological characteristics. The sixth article sought to evaluate to what extent the construct “search for meaning” relates to the different categories of meaning. Furthermore, we aimed to assess if search for meaning moderates the relation among the different categories of meaning with subjective well-being. Finally, the last empirical paper evaluated how different sociodemographic and psychological variables influence the intention in participating in the future waves of the present study. Participants were 3.034 subjects (63.9% women) with ages varying from 18 e 91 years old ($M = 33.9$; $DP = 15.01$), originated from 22 different Brazilian states. From the total, 91.4% answered the questionnaires in a web-based platform, whereas 8.6% answered in the paper-and-pencil method. The three adapted instruments presented adequate psychometric properties, and suggests its possible use in future studies. The results also showed the existence of different categories of meaning (meaningfulness, existential indifference, existential crisis, existential conflict), and that people inserted in these categories present important differences in their bio-psychosocial and psychological variables. It was also shown that search for meaning is higher among those in the existential conflict group, although search for meaning is positively related to crisis of meaning. The results of this study point to the need for further studies on the subject. This dissertation seeks to contribute to the Positive Psychology field by offering three different psychometric scales to use in the Brazilian context, and to present empirical results not previously achieved, contributing to the knowledge on the MIL literature.

Key-words: Meaning in Life; Positive Psychology; Brazil; Psychometrics; Validation; Subjective well-being.

CAPÍTULO I

APRESENTAÇÃO DA TESE

INTRODUÇÃO

A presente tese intitulada “Sentido de vida e Bem-Estar Subjetivo: Interações com Esperança, Otimismo, Autoeficácia e Autoestima em Diferentes Etapas do Ciclo Vital”, teve por objetivo avaliar diferentes aspectos do construto sentido de vida, em uma parcela da população brasileira. Além disso, o projeto visou a verificar como o construto sentido de vida (SV) se relaciona com diferentes aspectos humanos positivos, tais como otimismo, esperança, autoestima e autoeficácia, e como estas relações interagem com os índices de bem-estar subjetivo das pessoas, em diferentes etapas do ciclo vital.

Sua organização deu-se em formato de artigos científicos, com vistas à submissão e futura publicação em periódicos científicos nacionais e internacionais. Serão apresentados sete artigos, sendo um de revisão não sistemática da literatura acerca de diferentes instrumentos para avaliação do construto SV, e seis artigos empíricos, com objetivos distintos e complementares. Uma vez que cada artigo apresenta sua própria fundamentação teórica, esta introdução buscará apenas apresentar, sucintamente, os objetivos de cada estudo, sem adentrar nos detalhes teóricos dos construtos aqui investigados.

O primeiro capítulo da tese refere-se a uma revisão não sistemática da literatura que apresenta e discute os principais instrumentos desenvolvidos para avaliação do construto SV, explicitando as potencialidade e limitações de cada um deles. Pretende-se, também, tornar claras as razões as quais levaram o autor desta tese a optar por adaptar e validar para o contexto brasileiro dois instrumentos específicos de sentido de vida.

Os três próximos artigos empíricos desta tese (Artigo, 2, 3 e 4, respectivamente) são artigos de adaptação e validação de instrumentos psicológicos. Destes, o primeiro, sob título “Validation and Psychometric Properties of the Brazilian Version of the Meaning in Life Questionnaire”, teve por objetivo adaptar e validar para o contexto brasileiro o Questionário de Sentido de Vida, desenvolvida por Steger, Frazier, Oishi, e Kaler (2006). O Questionário de Sentido de Vida é composto por dez itens que avaliam dois diferentes construtos, a saber: busca por sentido (e.g., “I am looking for something that makes my life feel meaningful”) e presença de sentido (e.g., “My life has a clear sense of purpose”).

Posteriormente está apresentado o artigo intitulado “Sources of Meaning and Meaning in Life Questionnaire (SoMe): Psychometric Properties and Sociodemographic Findings in a Large Brazilian Sample”, que visou a validar o Questionário de Sentido de Vida e de Fontes de Sentido (Schnell 2009; Schnell & Becker, 2007) para o contexto brasileiro. Este questionário é composto por 151, e avalia 26 diferentes fontes de sentido, além de levantar indicadores sobre os níveis de sentido de vida e de crise existencial em duas subescalas independentes.

O terceiro artigo de validação de instrumento, intitulado “Validation and Psychometric Properties of the Brazilian Version of the Subjective Happiness Scale”, refere-se a um relato breve de pesquisa, que teve por objetivo adaptar e validar para o contexto brasileiro a Escala de Felicidade Subjetiva, desenvolvida por Lyubomirsky and Lepper (1999). Esta escala é composta por quatro (4) itens que avaliam, por meio de uma perspectiva subjetiva, os níveis de felicidade das pessoas.

Após a validação dos instrumentos, foram elaborados outros estudos empíricos que tiveram por objetivo avaliar como o SV e construtos relacionados (fontes de sentido e crise existencial) se relacionam com outros construtos psicológicos positivos (esperança, otimismo, autoestima, autoeficácia, felicidade subjetiva, e satisfação com a vida) em pessoas com diferentes características biossociodemográficas.

O artigo intitulado “Complex experiences of meaning in life: Individual differences among sociodemographic variables, sources of meaning and psychological functioning” foi fundamentado nos achados de Schnell (2010), pelos quais a autora, baseada na interação entre os níveis de sentido de vida e de crise existencial, apresentou as possibilidades de se investigar quatro diferentes de categorias de sentido: 1) realização existencial; 2) crise existencial; 3) indiferença existencial; 4) conflito existencial. Este artigo buscou investigar a existência dessas categorias de sentido na amostra brasileira, e compreender suas semelhanças e diferenças em termos de variáveis biossociodemográficas, fontes de sentido e funcionamento psicológico positivo (mensurado pelas variáveis esperança, otimismo, felicidade subjetiva, satisfação com a vida, autoestima e autoeficácia). Este artigo replica alguns dos achados de Schnell (2010) em uma cultura distinta, e avança no conhecimento por avaliar com as diferentes categorias de sentido se relacionam com as fontes de sentido e com outros construtos psicológicos anteriormente não mensurados.

O próximo artigo apresentado foi intitulado “*How search for meaning interacts with complex categories of meaning in life and subjective well-being?*”. Neste material, investigou-se como o construto busca por sentido se relaciona com as diferentes categorias de

sentido, além de avaliar se este construto poderia moderar a relação entre as diferentes categorias de sentido com os índices de bem-estar subjetivo, mensurado pelos construtos satisfação com a vida e felicidade subjetiva. Na altura do desenvolvimento deste artigo, foram apresentadas, também, associações inovadoras na literatura internacional, de modo que os resultados aqui apresentados contribuem diretamente para o conhecimento na temática do sentido de vida.

Por fim, o último artigo empírico desta tese, intitulado “Attrition rates in a Brazilian longitudinal survey focused on positive psychological characteristics: Theoretical, empirical and methodological considerations” avaliou em que medida diferentes variáveis biossociodemográficas e psicológicas influenciam na intenção dos participantes em continuar contribuindo com as futuras coletadas de dados longitudinais deste estudo. Embora não apresentado na tese, coleta de dados longitudinais estão planejadas para os próximos anos, com o objetivo de avaliar como participantes inseridos em diferentes categorias de sentido variam ao longo do tempo, e como as variáveis biossociodemográficas e psicológicas influenciam os aspectos existenciais ao longo do ciclo vital. Neste artigo, avaliou-se possíveis diferenças biossociodemográficas e psicológicas em relação a dois diferentes grupos: os que aceitaram participar das etapas futuras da pesquisa, e os que não aceitaram participar das etapas futuras da pesquisa. Um padrão bastante diferente foi encontrado para homens e para mulheres. Implicações para estudos longitudinais na área da Psicologia Positiva são discutidos.

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CAPÍTULO II

ARTIGO I

SENTIDO DE VIDA: DEFINIÇÃO E MEDIDAS¹

MEANING IN LIFE: DEFINITION AND MEASURES

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Sílvia Helena Koller

¹ Capítulo a ser publicado no livro “Psicologia Positiva no Brasil: Questionamentos e estudos atuais”

RESUMO

O interesse no construto sentido de vida apresenta uma longa trajetória na história da Psicologia. Entretanto, sua definição e avaliação tem, apenas recentemente, alcançado um status relativamente consensual. O presente capítulo tem como objetivo apresentar o construto sentido de vida (SV), discutindo suas principais definições e os principais instrumentos psicométricos para avaliação desse construto. Ao longo do capítulo serão apresentados as principais características de 13 instrumentos diferentes, dentre os quais, pelo menos cinco encontram-se validados para uso no contexto brasileiro. Espera-se que esse capítulo auxilie pesquisadores e profissionais interessados na temática do sentido de vida a buscar instrumentos adequados para as suas necessidades.

INTRODUÇÃO

Desde muito tempo, o ser humano tem buscado compreender o sentido da vida. Como um dos principais questionamentos existenciais, tal tema tem sido investigado, ao longo dos anos, por diversas áreas do conhecimento, tais como a Filosofia, a Teologia, bem como a Psicologia, resultando em diversas perspectivas, com origens culturais e ideológicas diferenciadas. Especificamente em relação à Psicologia, o interesse em compreender o que seria o sentido da vida foi fortemente influenciado pelos conhecimentos e pressupostos do existencialismo, tomando por base filósofos tais como: Søren Kierkegaard (1813-1855), Karl Jaspers (1883-1969), Martin Heidegger (1889-1976), Jean-Paul Sartre (1905-1980). A influência destes filósofos foi determinante para o surgimento da Psicologia Humanista que, por sua vez, foi a corrente psicológica responsável pela propagação da noção de que o construto sentido de vida (SV) seria um componente fundamental para o funcionamento psicológico positivo (Nakamura & Csikszentmihalyi, 2003; Schnell & Becker, 2006).

O paradigma da Psicologia Humanista em compreender o que seria o SV diferenciou-se das perspectivas filosóficas e teológicas por uma questão de prisma. Enquanto filósofos e teólogos, em geral, buscavam entender qual o sentido da vida humana, avaliando a origem e o significado cósmico do universo, a Psicologia Humanista buscou auxiliar os sujeitos na compreensão de qual seria o sentido de suas vidas em particular. Isto é, ancorou-se em uma perspectiva idiossincrática de que cada sujeito teria (ou deveria ter) um sentido único e exclusivo para a sua própria existência. Dentre os principais autores desta linha, destacam-se Gordon Allport, Abraham Maslow e, principalmente, Viktor Emil Frankl.

Durante meados do século XX, Viktor Frankl, elaborou uma complexa teoria, denominada Logoterapia e Análise Existencial, argumentando que todo ser humano teria uma motivação primordial: a busca por SV. De acordo com esta teoria, a busca por sentido seria uma necessidade diária, oriunda de uma motivação intrínseca ao ser humano, denominada 'vontade de sentido'. A 'vontade de sentido' referia-se, portanto, ao interesse contínuo do ser humano por um significado para a sua vida (Frankl, 1989). Frankl também argumentava que a presença de SV seria um componente fundamental para o bem-estar psicológico e subjetivo dos sujeitos. Do mesmo modo, a falta de SV poderia levar os sujeitos à experienciar um 'vácuo existencial', capaz de gerar afetos negativos, depressão e outros problemas psicológicos de cunho meramente existencial (Frankl, 1978, 2001, 2003, 2004).

Apesar do seu interesse sobre o tema, Frankl não criou uma definição do que seria SV. Entretanto, ressaltou a importância de focar no SV do sujeito, diferenciando este aspecto

individual de perguntas filosóficas sobre o sentido da existência humana, enquanto espécie animal. Em outras palavras, Frankl (1978) voltou as suas atenções para a questão: ‘Qual o sentido da minha vida’, em detrimento da questão: ‘Qual o sentido da vida humana na Terra?’.

Sentido de vida: Definindo o construto

Embora Frankl tenha publicado diversos livros sobre a sua teoria, as pesquisas sobre seus pressupostos foram, até recentemente, escassas. Atualmente, porém, o SV tem recebido elevada atenção empírica, repercutindo em avanço teórico e metodológico sobre o construto, bem como sobre suas relações com variáveis biossociodemográficas e com outros construtos psicológicos já existentes, tais como satisfação com a vida, felicidade, esperança, otimismo, autoeficácia, autoestima, etc (e.g., Ho, Cheung, & Cheung, 2010; Mascaro & Rosen, 2005).

Após a influência de Frankl no pensamento humanista da época, alguns autores tentaram corroborar ou refutar as hipóteses postuladas pela Logoterapia, bem como apresentar definições sobre o que, de fato, seria SV (e.g., Hutzell, 1986; Melton & Schulenberg, 2007; Schulenberg, 2003; Weisskopf-Joelson, 1975). Provavelmente, Reker e Wong (1988) foram os primeiros autores após Frankl a tentarem sistematizar o construto. Para estes autores, o SV seria composto por três componentes estruturais, sendo um componente cognitivo, um motivacional e outro emocional. Assim, definiram o construto como a percepção de ordem e coerência na própria existência, aliada à busca e ao cumprimento de metas/objetivos significativos, que resulta na sensação de realização e/ou felicidade (Reker, 2000; Reker & Wong, 1988).

O aspecto cognitivo do construto refere-se à percepção ordem e coerência na própria experiência de vida. As pessoas tendem a criar uma visão de mundo ou sistema de crenças pessoais que os auxiliam a lidar com questões existenciais, buscando valorar ou dar significado aos eventos e às circunstâncias ao longo da vida (Reker, 2000). Conforme a ciência cognitivista tem enfaticamente demonstrado, as pessoas são incapazes de viver suas vidas sem atribuir sentido a todas as experiências. Devido à função semiótica da linguagem (Pino, 1995; Vygotsky, 1984) através do processo de significação, ancorado por signos e símbolos, o ser humano atribui significado a tudo que vivência (Smolka, 1993), desde a compreensão de simples objetos (e.g., o que significa - ou qual o sentido de - uma porta) até construtos mais abstratos, tais como a vida. Assim, as pessoas tendem a extrair SV através da avaliação que estes fazem sobre a coerência de suas ações relacionadas aos seus sistemas de valores pessoais.

O aspecto motivacional, por sua vez, refere-se à busca e a concretização dos objetivos significativos (*purposeful goals*) que as pessoas estabelecem para as suas vidas – ou seja, seus propósitos (Emmons, 2003; Klinger, 1998; Ryff & Singer, 1998; Steger, 2009). De acordo com esta perspectiva, ter objetivos significativos na vida é um alicerce direto para a concretização de sentido. Isto porque a presença de objetivos significativos conduz os sujeitos a compreenderem o que eles querem realizar na vida e os leva à compreensão do seu significado existencial (i.e., ‘Por que [ou para que] eu estou aqui?’ ou ‘Qual é o meu propósito?’).

Por fim, o componente afetivo do construto SV seria composto pelas emoções positivas (e.g., felicidade) derivadas da percepção de sentido e da busca e concretização dos propósitos. Em consonância com estes pressupostos, Wong (1989) salientou que a percepção de sentido seria um sistema cognitivo pessoal pautado em valores subjetivos que são capazes de atribuir à vida sentido e satisfação. Já Rosenmayr (1985), na mesma linha de Reker e Wong (1988), definiu SV como um componente cognitivo relativo à percepção de que a ação pessoal do sujeito corresponde aos seus objetivos pessoais, proporcionando satisfação e felicidade.

Essa definição de sentido de vida, porém, não é totalmente consensual na literatura. Alguns autores são cautelosos ao incorporar os aspectos afetivos no construto sentido de vida (King, Hicks, Krull, & Del Graiso, 2006; Steger, 2009). De acordo com Steger (2009), os elementos do construto SV que o torna único e separável de outros construtos psicológicos já existentes são os componentes cognitivos e motivacionais. Para este autor, os aspectos emocionais que, teoricamente, derivam do SV (e.g., felicidade) são conseqüências da sensação de realização existencial, mas não a realização existencial em si mesma. Em outras palavras, as pessoas que percebem sentido em suas vidas são também felizes, entretanto, a felicidade não seria um elemento constituinte do construto SV, mas resultado da sensação de realização existencial.

Considerando estes aspectos, Steger (2009) define sentido de vida como o grau em que as pessoas compreendem e percebem significância em suas vidas, bem como o grau em que elas percebem que têm um propósito ou um objetivo primordial em suas vidas. Já para Schnell (2009), sentido de vida pode ser definido como uma percepção significância, baseada numa avaliação pessoal de que a própria vida é coerente, significativa e dirigida a objetivos.

Conforme pode ser percebido, ambas as definições propostas por Steger (2009) e Schnell (2009) diferem daquela elaborada por Reker e Wong (1988), por não incorporarem os aspectos afetivos na compreensão do que seria sentido de vida. Estudos empíricos

desenvolvidos por King et al. (2009) tem corroborado essa perspectiva. Por meio de cinco estudos, as autoras demonstraram que os níveis de felicidade eram preditores da percepção de sentido de vida, mas não o contrário. Em outras palavras, pessoas que tinham maiores níveis de felicidade tendiam a julgar suas vidas como mais significativas. Por outro lado, os níveis de percepção de sentido não tiveram a capacidade de prever os níveis de felicidade, conforme proposto por Reker e Wong (1988). É importante salientar, porém, que estudos futuros precisam ser conduzidos para corroborar ou refutar os achados apresentados por King et al. (2009).

Sentido de vida: Como mensurar?

Ao longo dos anos, diversos pesquisadores tentaram sistematizar o construto SV e avaliá-lo por uma perspectiva psicométrica. Atualmente, é possível encontrar uma série de instrumentos que avaliam pelo menos três diferentes aspectos relacionados ao construto SV, a saber: índices de SV; busca por sentido e fontes de sentido. A Tabela 1 apresenta os principais instrumentos utilizados na literatura.

O primeiro instrumento desenvolvido para avaliar SV foi o Teste de Propósito na Vida (*Purpose in Life Test*, PIL-Test), desenvolvido por Crumbaugh e Maholick (1964). Em sua versão original, o instrumento era composto por três partes: A primeira parte referia-se a um instrumento de 20 itens, respondidas por meio de uma escala de cinco pontos, que visava a avaliar os níveis de SV dos sujeitos. A segunda parte do instrumento era composta por três frases incompletas, que tangiam aspectos sobre as experiências de vida dos sujeitos. Os respondentes deveriam completar as frases com as primeiras ideias que lhes surgissem.

Por fim, a terceira parte referia-se a um registro autobiográfico, em que o sujeito deveria descrever, de maneira resumida, as suas metas, ambições e projetos de vida. Enquanto a segunda e a terceira parte do PIL-Test tornaram-se instrumentos utilizados praticamente no âmbito clínico, havendo raros registros de publicações, a primeira parte tornou-se um instrumento psicométrico amplamente utilizado em pesquisas ao redor do mundo.

Logo após o desenvolvimento do PIL-Test, pesquisadores perceberam que a escala apresentava sérias inadequações psicométricas, tais como inconsistência fatorial (Chamberlain & Zika, 1988; Dufton & Pearlman, 1986); falta de validade discriminante (Braun & Domino, 1978; Dyck, 1987; Yalom, 1980), e forte sobreposição de conteúdo com outras variáveis as quais o teste deveria ser capaz de prever, tais como depressão (Battista & Almond, 1973; Dyck, 1987; Yalom, 1980). Alguns itens, como por exemplo: “Geralmente estou completamente aborrecido” e “Minha vida é vazia, preenchida só com desespero”,

demonstraram estar mais relacionados com indicadores negativos de bem-estar psicológico, do que propriamente com baixos índices de sentido de vida.

Com o objetivo de suprimir as limitações do PIL-Test, Battista e Almond (1973) desenvolveram o *Life Regard Index* (LRI), um instrumento composto por 28 itens que objetivava a avaliar os índices de sentido de vida dos sujeitos. Entretanto, diversos autores (Debats et al., 1993; Zika & Chamberlain, 1992; Steger, 2007; Steger et al., 2006) argumentaram que o LRI apresentava problemas semelhantes ao PIL-Test. Ou seja, o instrumento apresentava-se itens que se sobrepunha a diversos outros construtos, tais como: vitalidade e felicidade. Indicadores desta sobreposição foram publicados na literatura (e.g., “Me sinto tão entusiasmado com o que estou fazendo que encontro fontes de energia as quais eu não sabia que possuía”, e “Sinto-me muito feliz com a minha vida”). Por meio de um estudo empírico Debats et al. (1993) encontraram forte correlação entre os escores do LRI e felicidade ($r = 0,73$; $p < 0,001$), comprovando a sobreposição entre os construtos e desestimulando o uso da escala.

Em 1977, Crumbaugh (1977) apresentou o *Seeking of Noetic Goals* (SONG), um instrumento complementar ao PIL-Test, composto por 20 itens respondidos em uma escala de sete pontos, desenvolvido para avaliar o quanto os sujeitos estão motivados a encontrarem sentido em suas vidas. Tal instrumento foi o primeiro a avaliar o construto “busca por sentido”, desenvolvido por Frankl (1955/2004), entretanto alguns autores questionaram severamente sua validade de construto (Moreland 1985; Steger et al., 2006), julgando-o como uma medida inválida (Dyck, 1987).

Posteriormente, Reker e Peacock (1981) apresentaram o *Life Attitude Profile* (LAP), um instrumento multidimensional desenvolvido para avaliar tanto os níveis de SV quanto de busca por sentido. O instrumento é composto por 48 itens, subdivididos em seis dimensões, a saber: propósito, coerência, responsabilidade, aceitação da morte, vazio existencial e busca por objetivos (Reker, 2000). A multidimensionalidade da escala refere-se aos pressupostos teóricos da Logoterapia; abordagem utilizada no desenvolvimento do instrumento. Devido às características do conteúdo dos itens, o instrumento é utilizado principalmente em pesquisas que avaliam pessoas em situação de vulnerabilidade, como pacientes portadores de câncer (Anagnostopoulos, Slater, Fitzsimmons, & Kolokotroni, 2010).

Tabela 1.

Instrumentos para Avaliação de Aspectos do Construto Sentido de Vida

Instrumento	Autores	Aspectos que avalia
<i>Purpose in Life Test</i> (PIL-Test)	Crumbaugh e Maholick (1964)	Índices de sentido de vida
<i>Life Regard Index</i> (LRI)	Battista e Almond (1973)	Índices de sentido de vida
<i>Seeking of Noetic Goals</i> (SONG)	Crumbaugh (1977)	Busca por sentido de vida
<i>Life Attitude Profile</i> (LAP)	Reker e Peacock (1981)	Índices e busca por sentido de vida
<i>Psychological Well-Being Scales</i> (PWBS)	Ryff (1989)	Diversas facetas do bem-estar psicológico
<i>Sense of Coherence Scale</i> (SOC)	Antonovsky (1993)	Manejo do ambiente; compreensão do mundo; sentido de vida
<i>Sources of Meaning Profile</i> (SOMP-R)	Reker (1996)	Fontes de sentido de vida
<i>Personal Meaning Profile</i> (PMP)	Wong (1998)	Fontes de sentido de vida
<i>Life Engagement Test</i> (LET)	Scheier et al. (2006)	Índices de sentido de vida
<i>Meaning in Life Questionnaire</i> (MLQ)	Steger et al. (2006)	Índices e busca por sentido de vida
<i>Sources of Meaning Questionnaire</i> (SoMe)	Schnell e Becker (2007)	Índices de sentido de vida; crise existencial; fontes de sentido de vida
<i>Schedule for Meaning in Life Evaluation</i> (SMiLE)	Fegg, Kramer, L'hoste e Borasio (2008)	Índices de sentido de vida
<i>The Meaningful Life Measure</i> (MLM)	Morgan e Farsides (2009a, 2009b)	Índices de sentido de vida

Já a *Psychological Well-Being Scales* (PWBS), desenvolvida por Ryff (1989), se refere a um instrumento que avalia os índices de bem-estar psicológico, a partir de seis diferentes indicadores, dentre os quais se encontra o SV. O instrumento foi originalmente

desenvolvido contendo 120, mas versões reduzidas de 84, 54, 42 e 18 itens são atualmente usadas (Abbott, Ploubidis, Huppert, Kuh, & Croudace, 2010). Apesar de a PWB ser um instrumento mundialmente aceito e utilizado nas pesquisas sobre bem-estar psicológico (Visani et al., 2011), os pesquisadores interessados na temática específica do sentido de vida, em geral, utilizam instrumentos específicos para avaliação do construto.

Em 1993, Antonovski elaborou a *Sense of Coherence Scale* (SOC), com o objetivo de avaliar o construto senso de coerência, desenvolvido pelo mesmo autor. Segundo o autor, o senso de coerência refere-se à capacidade que os sujeitos têm de compreender o mundo em que se está inserido (*comprehensibility*), lidar adequadamente com as situações diárias (*manageability*), e extrair sentido dessas vivências (*meaningfulness*). O instrumento já foi validado em pelo menos 32 países, apresentando adequada estrutura fatorial, bem como bons índices de consistência interna e de estabilidade temporal (Eriksson & Lindström, 2005). Entretanto, uma vez que apenas uma subescala do SOC avalia os índices de sentido de vida, o instrumento não tem sido utilizado na literatura sobre sentido de vida (Debats, 1998), apesar de ser amplamente empregado para avaliar o construto senso de coerência (Eriksson & Lindström, 2005).

Em 1996, foi desenvolvido o *Sources of Meaning Profile* (SOMP-R, Reker, 1996), o primeiro instrumento psicométrico desenvolvido explicitamente para avaliar as fontes de sentido. Entende-se por fontes de sentido os aspectos que os sujeitos julgam como importantes para suas vidas, e que, em menor ou maior medida, auxiliam os sujeitos na percepção de que, por tais aspectos, a vida vale a pena. O SOMP-R é um instrumento de 17 itens, que avalia por meio de uma escala de sete pontos quatro diferentes fontes de sentido, a saber: autotranscendência, coletivismo, individualismo, e autopreocupação. Apesar de ser o instrumento pioneiro para avaliar as fontes de sentido, não houve ampla aceitação da escala na literatura internacional. Assim, Wong (1998) desenvolveu o *Personal Meaning Profile* (PMP), um instrumento composto por 57 itens, respondido por meio de uma escala de sete pontos, que também avalia as fontes de sentido dos sujeitos. Apesar da proposta semelhante à SOMP-R, a PMP avalia uma maior diversidade de fontes de sentido, a saber: realização; relacionamentos; religiosidade; autotranscendência; autoaceitação; intimidade; e justiça. O instrumento vem sendo utilizado atualmente (e.g., Varahrami, Arnau, Rosen, & Mascaro, 2010), apesar de avaliar um número limitado de fontes de sentido (Schnell, 2011).

O *Life Engagement Test* (LET), desenvolvido por Scheier et al. (2006), é um instrumento recente que avalia os índices de SV por meio de seis itens, respondidos em uma escala de cinco pontos. De acordo com os autores, o LET foi desenvolvido com o objetivo de

suprir as limitações dos instrumentos anteriores (e.g., PIL-Test e LRI), que avaliavam outros construtos além do sentido de vida. Embora o instrumento tenha apresentado adequadas propriedades psicométricas, o mesmo não tem sido amplamente utilizado na literatura.

Concorrente ao desenvolvimento do LET, Steger et al. (2006) apresentou, também em 2006, o *Meaning in Life Questionnaire* (MLQ), um instrumento que visa a avaliar os índices de sentido de vida e de busca por sentido. O instrumento consta de 10 itens (sendo cinco para cada construto), respondidos em uma escala de sete pontos. Assim como o LET, a preocupação destes autores foi o de construir um instrumento que avaliasse, de fato, apenas aspectos do construto sentido de vida. O MLQ foi, portanto, desenvolvido com base em análises psicométricas robustas, utilizando análises de multitraço multimétodo para avaliar a validade discriminante do instrumento (i.e., demonstrar que o instrumento avalia de fato sentido de vida, ao invés de outras medidas de bem-estar psicológico). Também utilizou-se análises fatoriais confirmatórias para avaliar a adequação de ajuste da medida. Os resultados das análises multitraço multimétodo, somadas aos índices de ajuste do instrumento e aos índice de consistência interna para as escalas ‘presença de sentido’ e ‘busca por sentido’, sugeriram que o MLQ é um instrumento adequado para uso, superando diversas limitações da literatura. Atualmente, o MLQ vem sendo amplamente reconhecido e utilizado na literatura internacional, sendo um ótimo instrumento para avaliação tanto da presença de sentido de vida quanto da busca por sentido.

Em 2007, Schnell e Becker (2007) apresentaram o *Sources of Meaning Questionnaire* (SoMe), um instrumento composto por 151 itens, respondidos em uma escala likert de seis pontos, que avalia os índices de sentido e de crise existencial, bem como uma ampla variedade de fontes de sentido. O SoMe apresenta diversas vantagens em relação a outros instrumentos descritos anteriormente. Primeiramente, o instrumento avalia tanto os índices de sentido de vida quanto os índices de crise existencial. Segundo Schnell (2009), sentido de vida e crise existencial não são duas extremidades de um mesmo *continuum*, de modo que essas dimensões devem ser avaliadas separadamente. Por meio da avaliação desses dois construtos, Schnell (2010) apresentou quatro diferentes categorias de sentido de vida: 1) realização existencial: pessoas com alto nível de sentido de vida, e baixo nível de crise existencial; 2) crise existencial: pessoas com baixo nível de sentido de vida, e alto nível de crise existencial; 3) conflito existencial: pessoas com alto nível de sentido de vida, e alto nível de crise existencial; 4) indiferença existencial: pessoas com baixo nível de sentido de vida e baixo nível de crise existencial. Estudos empíricos tem demonstrado que pessoas inseridas nestas diferentes categorias de sentido apresentam perfis psicológicos bastante diferenciados,

principalmente no que se refere a índices de bem-estar e engajamento com diferentes fontes de sentido (para maiores informações, ver Damásio & Koller, 2013c; Schnell, 2010).

Além da possibilidade da SoMe avaliar índices de sentido de vida e crise existencial como construtos independentes, o instrumento ainda avalia uma ampla diversidade de fontes de sentido (26), contemplando todos os aspectos até então citados na literatura sobre a temática (Bar-Tur et al., 2001; Debats, 1999; Emmons, 2003; Prager, 1996; Reker & Wong, 1988). Além disso, as 26 fontes de sentido podem ser subdivididas em quatro grandes dimensões, que consistentemente se apresentam como indicadores sob os quais as pessoas extraem sentido, a saber: autotranscendência; autoatualização; ordem; e bem-estar e relacionamentos.

A dimensão ‘Autotranscendência’ refere-se à realização de objetivos que estão além das necessidades pessoais imediatas. Esta dimensão é subdividida em duas: ‘Autotranscendência vertical’ – relacionada a aspectos imateriais e cósmicos (religiosidade e espiritualidade); e ‘autotranscendência horizontal’ – relacionada à responsabilidade pessoal para assuntos além das necessidades pessoais. A dimensão ‘Autoatualização’ refere-se aos aspectos relacionados a empregar, desafiar e promover as capacidades pessoais. A dimensão ‘Ordem’ refere-se a ter a conduta pessoal baseada em valores morais, tradicionais, razão, etc. A última dimensão, denominada ‘Bem-estar e Relacionamentos’ refere-se a aproveitar a vida e cultivar relacionamentos interpessoais afetivos.

O instrumento foi construído através de um programa de pesquisa qualitativa (Schnell & Becker, 2007), ao longo de seis anos de desenvolvimento. Os itens que compõem as fontes de sentido no SoMe foram aprimorados em diversos estudos (Schnell & Becker, 2007). A versão final do instrumento apresentou adequadas propriedades psicométricas, obtidas por meio de uma amostra representativa da Alemanha ($N = 603$). Além de adequada estrutura fatorial e consistência interna, o instrumento apresentou boa estabilidade temporal.

Outro estudo desenvolvido por Fegg et al. (2008), visou a apresentar os procedimentos de desenvolvimento e de validação da *Schedule for Meaning in Life Evaluation* (SMiLE), um instrumento de autorrelato, também, com o objetivo de avaliar os índices de sentido de vida das pessoas. O SMiLE apresenta uma proposta diferente dos outros instrumentos até então apresentados. É composto por três partes: inicialmente, os respondentes são solicitados a reportar entre três a sete aspectos que julguem importantes para seus índices de sentido de vida. Posteriormente, são reportados os níveis de satisfação pessoal com os aspectos citados (variando entre -3 e +3). Por fim, os sujeitos avaliam a importância de cada uma dos aspectos, por meio de uma escala composta por oito pontos, variando entre ‘nada importante’ a ‘muito

importante'. Apesar de ser um instrumento recente, o SMiLE já foi adaptado para diversas culturas.

Por fim, o *Meaningful Life Measure* (MLM), proposto por Morgan e Farsides (2009a; 2009b), refere-se a um instrumento de 23 itens que tem por objetivo avaliar os índices de sentido de vida através de cinco dimensões: 1) vida baseada em propósitos; 2) vida baseada em princípios; 3) vida baseada em valores; 4) vida baseada em excitações; 5) vida baseada em realizações pessoais. O MLM foi desenvolvido utilizando uma análise fatorial exploratória (AFE) contendo os itens de três diferentes instrumentos de sentido de vida (PIL-Test; LRI; PWB-P) e quatro itens adicionais desenvolvidos para atingir os objetivos do estudo (Morgan & Farsides, 2009b). A partir de um processo de refinamento, 23 itens foram selecionados, mensurando os cinco construtos acima mencionados. De acordo com os autores, o instrumento pode ser avaliado de maneira unidimensional (sentido de vida) ou multidimensional, investigando os fatores separadamente. O instrumento não tem sido utilizado com frequência na literatura, possivelmente por ser uma medida recente, e por haver medidas menores que avaliam o mesmo construto.

Instrumentos de Sentido de Vida Validados para Uso no Contexto Brasileiro

No Brasil, a avaliação do construto sentido de vida por meio de uma perspectiva psicométrica não é muito ampla, embora alguns pesquisadores tenham impulsionado o desenvolvimento da área (e.g., Aquino, Alves, Aguiar, & Refosco, 2010; Aquino, Serafim, Barbosa, Cirne, & Ferreira, 2011; Damásio, 2013a, 2013b; Damásio, Melo, & Silva, *in press*). Atualmente, pelo menos três instrumentos estão validados para uso no contexto brasileiro. O primeiro deles é uma versão reduzida do PIL-Test, intitulado PILTest-12, validado por Aquino (2009). O instrumento consta de 12 itens, que avaliam o sentido de vida. Em alguns estudos, o PILTest-12 apresentou melhor estrutura fatorial composta por três dimensões: 1) desespero existencial, 2) realização existencial, e 3) vazio existencial. Em outros estudos, porém, o PILTest-12 apresentou estrutura bi-dimensional (realização e vazio existencial; Silva, Damásio, & Melo, 2009); e ainda, estrutura unidimensional, avaliando o escore total de sentido de vida (Damásio et al., 2013). Assim, ainda não é clara a real estrutura do PILTest-12 no contexto brasileiro e a sua adequação. Ademais, também não está claro até que ponto o PILTest-12 suprimiu as limitações do instrumento original, apresentadas neste estudo.

Recentemente, Damásio e Koller (2013a, 2013b) validaram, para o contexto brasileiro, dois novos instrumentos para avaliação de diferentes aspectos do construto sentido de vida, a saber, o *Meaning in Life Questionnaire* (MLQ) e o *Sources of Meaning and Meaning in Life*

Questionnaire (SoMe). Para a validação desses instrumentos, foi utilizada uma ampla amostra nacional, composta por 3.034 participantes, de 22 estados brasileiros. A coleta foi realizada por meio de questionários impressos bem como por meio de uma plataforma online de pesquisa. Os resultados desses estudos corroboraram a literatura internacional, comprovando a adequada estrutura fatorial de ambos os instrumentos, bem como apresentando adequados índices de validade e confiabilidade para as escalas. Em relação ao MLQ (Damásio & Koller, 2013a), o estudo demonstrou que ambas as escalas (presença de sentido e busca por sentido) apresentaram excelentes propriedades psicométricas, indicando que a MLQ no contexto brasileiro mensura satisfatoriamente os construtos propostos. Em relação ao SoMe (Damásio & Koller, 2013b), os autores corroboraram a literatura internacional, demonstrando que, de fato, os construtos sentido de vida e crise existencial são melhor mensurados separadamente, conforme sugerido por Schnell (2010). Já em relação às fontes de sentido, também foram encontrados adequados índices de confiabilidade para todas as 26 fontes. Além disso, conforme esperado, os autores demonstraram que as fontes de sentido se subdividiram em cinco dimensões autotranscendência vertical, autotranscendência horizontal, autoatualização, ordem e bem-estar e relacionamentos, com pequenas variações, quando comparado com o instrumento original (Schnell, 2009). Os resultados dos estudos de validação da MLQ e da SoMe indicam que os instrumentos são úteis para serem utilizados em uma ampla faixa etária, de jovens, adultos e idosos, bem como para ambos os sexos.

Núñez Rodríguez, Pereira, & Koller (2013) apresentaram os procedimentos de adaptação do SMiLE para o português brasileiro. De acordo com os autores, a adaptação do instrumento foi conduzida tomando por base as diretrizes da *International Test Commission* (ITC, 2010) e as proposições apontadas por Borsa, Damásio, e Bandeira (2012). Após o procedimento de adaptação dos itens, o instrumento foi submetido a um estudo-piloto, realizado por 30 estudantes universitários da Universidade Federal do Rio Grande do Sul (idades variando entre 18 e 25 anos). Nesta aplicação, algumas sugestões foram apontadas, e as modificações implementadas, com vistas a melhor adequar a escala para o contexto brasileiro. Estudos relacionados às propriedades psicométricas da versão brasileira do SMiLE encontram-se em elaboração (Núñez Rodríguez, comunicação pessoal).

Além desses instrumentos específicos para avaliar sentido de vida, Machado, Pawlowski, e Bandeira (2013) validaram a versão brasileira da *Psychological Well-Being Scale* (PWBS; Ryff, 1989), em português, Escala de Bem-Estar Psicológico (EBEP). Participaram deste estudo 313 estudantes universitários, com idades variando entre 18 a 57 anos de idade. A EBEP é composta por 36 itens, oriundos da versão original de 84 itens,

sendo que destes, seis itens fazem referência especificamente à escala de propósito de vida. O restante (30 itens) englobam cinco outras dimensões do bem-estar psicológico, a saber: relações positivas com outros; autonomia; domínio sobre o ambiente; crescimento pessoal e autoaceitação. No estudo de Machado et al. (2013), a escala completa apresentou adequados índices de ajuste da estrutura fatorial, bem como adequados índices de consistência interna para todos os fatores, incluindo o propósito de vida.

CONCLUSÕES

O construto sentido de vida vem sendo estudado no âmbito da Psicologia há pelo menos seis décadas, quando Frankl (1946/2004) publicou o livro “Em busca de sentido: Um psicólogo no campo de concentração”. Embora o autor já tivesse elaborado e divulgado alguns dos preceitos de sua corrente teórica, Logoterapia e Análise Existencial, sem dúvida este livro impulsionou consideravelmente o interesse na área.

Não tardou para que pesquisadores iniciassem estudos tentando comprovar e refutar as propostas de Frankl, sendo que o primeiro instrumento psicométrico para avaliar diferentes aspectos do construto sentido de vida foi publicado ainda no início da década de 60 (Crumbaugh & Maholick, 1964). Conforme pôde ser visto ao longo desse estudo, porém, a conceituação de sentido de vida não foi facilmente conquistada, de modo que diversos instrumentos foram desenvolvidos e posteriormente negligenciados por não conseguirem mensurar adequadamente o construto. Atualmente essa limitação parece ter sido suprimida, principalmente com o desenvolvimento do MLQ (Steger et al., 2006) e de instrumentos subsequentes, que não mais incorreriam nos erros passados.

No Brasil, um conjunto de estudos tem buscado avaliar diferentes fenômenos do sentido de vida, embora esforços ainda sejam necessários para ampliar a área. Com a validação dos novos instrumentos anteriormente mencionados (MLQ, PWBS, SoMe, SMiLe), bem como com novos estudos que avaliem a adequação do PILTest-12 ao contexto brasileiro, espera-se que pesquisas empíricas acerca do sentido de vida e dos seus construtos subjacentes cresça cada vez mais, ampliando o conhecimento na temática, o que auxiliaria pesquisadores e profissionais de diversas áreas a elaborarem estratégias de prevenção, proteção, e desenvolvimento de aspectos existenciais dos sujeitos em diversos contextos.

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CAPÍTULO III

ARTIGO II

VALIDATION AND PSYCHOMETRIC PROPERTIES OF THE BRAZILIAN VERSION OF THE MEANING IN LIFE QUESTIONNAIRE²

VALIDAÇÃO E PROPRIEDADES PSICOMÉTRICAS DA VERSÃO BRASILEIRA DO QUESTIONÁRIO DE SENTIDO DE VIDA

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ABSTRACT

This study aimed to present the validation process and the psychometric properties of the Brazilian version of the Meaning in Life Questionnaire (MLQ). Participants were a nationwide sample of 3.020 subjects ranging in age from 18 to 91 years old, from 22 different Brazilian states. Exploratory factor analysis supported the bi-factorial solution (presence of meaning - MLQ-P; and search for meaning – MLQ-S). Adequate reliability indexes were achieved. Confirmatory factor analyses (CFA) provided evidences that the MLQ-P and MLQ-S scales present better goodness-of-fit indexes when evaluated separately. Multigroup CFA achieved full measurement and structural invariance for gender and age (youngsters, adults and the elderly) groups. Group comparisons were conducted for evaluating gender, age and marital status differences in both MLQ-P and MLQ-S scales. The results are presented and discussed based on the literature. Our results suggest that the MLQ is a reliable measure to evaluate presence and search for meaning in life in the Brazilian population in a wide variety of age groups.

Keywords: Meaning in life; scale; Brazil; validation; multigroup confirmatory factor analysis.

INTRODUCTION

Meaning in life (MIL) may be defined as the extent to which people comprehend and see significance in their lives, as well as the degree they perceive themselves to have a purpose or overarching aim in life (Steger, 2009). It is assumed that MIL is primarily cognitive in nature, including beliefs related to purpose in life and moral beliefs (Heine, Proulx, & Vohs, 2006; McMahan & Renken, 2011).

Decades of research have provided empirical evidences that MIL plays an important role in the human positive functioning (McMahan & Renken, 2011). For example, MIL is positively associated with psychological and subjective well being, and quality of life (Ho, Cheung, & Cheung, 2010; Melton & Schulenberg, 2008; Steger & Frazier, 2005); self-esteem (Halama & Dedova, 2007; Schlegel, Hicks, King, & Arndt, 2011); hope (Halama, 2005; Mascaro & Rosen, 2005); optimism (Ho et al., 2010; Taubman-Ben-Ari & Weintroub, 2008); self-efficacy (DeWitz, Woolsey, & Walsh, 2009), among others.

Regarding physical and mental health, studies have provided evidences that MIL is an important component in the recovery of victims of serious illness, such as cord injury (Thompson, Coker, Krause, & Henry, 2003). MIL also presented a mediational role between the relation of negative reminiscence with psychological distress (depression and anxiety) among older adults with mild to moderate depressive symptoms (Korte, Cappeliez, Bohlmeijer, & Westerhof, 2012). MIL also seems to present an indirect effect on mortality. Krause (2009), for example, evaluated to what extent MIL was related to mortality in old age. Data was collected with a nationwide American sample ($N = 1.361$) of older adults. Three main findings emerged from this study. First, older people with a strong sense of MIL were less likely to die over the study follow-up period than those who do not have a strong sense of MIL. Second, the effect of MIL on mortality was attributed to the potentially important indirect effect that operates through health. And third, further analyses revealed that having a strong sense of purpose in life presented the stronger relationship with mortality than other facets of meaning.

To the same extent that the presence of MIL has presented as an important indicator of human positive functioning, the absence of meaning also has negative consequences. Lack of MIL is related to higher levels of neuroticism (Zika & Chamberlain, 1992); perceived stress (Bauer-Wu & Farran, 2005); negative affect (Debats, van der Lubbe, & Wezeman, 1993); depression (Mascaro & Rosen, 2005); suicidal ideation (Edwards & Holden, 2001); drug

addiction (Henrion, 2002), etc. Considering this amount of evidences, MIL is nowadays recognized as a formative marker of human positive functioning (Steger & Shin, 2010).

Another aspect related to meaning in life is the construct 'search for meaning'. In the initial psychological literature regarding meaning in life, search for meaning was considered a daily need, originated from an intrinsic human motivation, called "will to meaning" (Frankl, 1963). According to Frankl (1963, 1978), the search for meaning should be a never-ceasing motivation, since every moment that one could achieve his ambitions, new life goals tended to arise, leaving one always future-oriented, searching for new achievements and new meanings for the existence. Although in recent years there has been a growing interest on MIL, the construct 'search for meaning' was almost overlooked in the literature (Steger, Kashdan, Sullivan, & Lorentz, 2008).

Search for meaning has been studied primarily in the context of responses to negative stressful events (Skaggs & Barron, 2006; Steger, Frazier, Oishi, & Kaler, 2006), such as HIV contamination (Bloom, 2008); changes in the work context (Guevara & Ord, 1996); neoplastic diseases (Lee, 2008; Richer & Ezer, 2000); familiar loses (Chan & Chan, 2011; Leith, 2009); marital problems (Farghadani, Navabinejad, & Shafiabady, 2010), etc. These studies have provided evidences that search (and finding or believing in) a positive meaning to a stressful situation can booster the adaptation process, resulting in resilient responses.

An important thing to note is that, initially, search for meaning was comprehended as a positive construct, regardless of whether the subject was experiencing or not a risk situation (Frankl, 1978). However, others have suggested that search for meaning occurred only in people who have had their needs frustrated (Baumeister, 1991; Kingler, 1998). To Baumeister (1991), people search for meaning when they do not perceive meaning in their lives or when they are going through stressful life events (e.g., death of spouse) that require new adjustment and re-elaboration of their existence through the pursuit of new "structures of meaning". On the other hand, a third approach (Reker, 2000) suggests that both possibilities are plausible, so that the construct search for meaning would be anchored by both a life-affirming perspective and based on deficits (Reker, 2000).

In cases of people who are not facing negative situations, search for meaning has proved to be mostly negative. Search for meaning presented positive correlations with fear ($r = .25, p < .005$), shame ($r = .19, p < .05$), sadness ($r = .26, p < .01$), neuroticism ($r = .20, p < .05$) and depression ($r = .36, p < .005$;) and negative correlations with psychological well-being (environmental mastery, $r = -.23, p < .05$; relatedness, $r = -.28, p < .001$; and self-acceptance, $r = -.36, p < .001$). However, when considering people with a high sense of

meaning in life (high levels of presence of meaning), search for meaning proved to be a positive variable, presenting positive correlations with life satisfaction and happiness, and negative correlations with depression (r values not presented; Park, Park, & Peterson, 2010).

All these empirical evidences points out to how important MIL and search for meaning are, and how necessary is to have reliable instruments to assess these constructs. The first instrument designed to assess the presence of MIL was the Purpose in Life Test (PIL-Test, Crumbaugh & Maholick, 1964). Since its publication, many other questionnaires were developed aiming to assess not only the presence of meaning, but also other aspects related to MIL, such as search for meaning (e.g., Seeking of Noetic Goals, SONG, Crumbaugh, 1977; Life Attitude Profile, LAP, Reker & Peacock, 1981) and sources of meaning (e.g., Sources of Meaning Profile, SOMP-R, Reker, 1996; Sources of Meaning Questionnaire, SoMe, Schnell & Beker, 2007). In a recent systematic review of the literature, Brandstätter, Baumann, Borasio, and Fegg (2012) found 59 different instruments designed to evaluate MIL aspects. Of these, the Meaning in Life Questionnaire (MLQ, Steger et al. 2006) is probably the one which has found major acceptance in the field. This did not happen by chance. The MLQ was designed to overcome several limitations of the previous most widely used MIL questionnaires, namely the PIL-Test (Crumbaugh & Maholick, 1964), the Life Regard Index (LRI, Battista & Almond, 1973), and the Sense of Coherence (SOC, Antonovsky, 1987). The PIL-Test, for example, was criticized by its psychometric inadequacy, such as factorial instability (Chamberlain & Zika, 1988), lack of discriminant validity (Braun & Domino, 1978), and strong overlap content with other variables that the PIL-Test was supposed to predict, such as depression (Battista & Almond, 1973) and life satisfaction (Dufton & Perlman, 1986). Items like “I am usually (bored or enthusiastic) and “My life is (empty, filled only with despair, or running over with exciting things) are more related with psychological well-being indicators than with MIL itself. The last criticism (overlap content) were also applied to the LRI (Battista & Almond, 1973), which presented items such as “I feel really good about my life”, which could tap out constructs such life satisfaction, positive affect, etc (Steger et al., 2006).

Aware of these limitations, Steger et al. (2006) developed the MLQ with the explicit objective of purely evaluate the MIL construct. More than that, the authors emphasized the need to evaluate a second construct, namely search for meaning, which had been almost neglected in the literature (Steger et al., 2006). Throughout three studies, the authors presented the development, evaluation, refinement and psychometric properties of the MLQ (Steger et al., 2006). The final version of the MLQ is composed by ten items, five tapping out

the construct meaning in life, and five the construct search for meaning. This 10-item version achieved acceptable fit and reliability indexes, through three independent samples (Sample 1 [$N = 153$]: $\chi^2 = 57.68$, $p < .01$; GFI = .93; AGFI = .89; NFI = .93; TLI = .96, CFI = .97, IFI = .97; RMSEA = .07; α for presence subscale = .86; α for search subscale = .87; Sample 2 [$N = 279$]: $\chi^2 = 56.04$, $p < .01$; GFI = .97; AGFI = .96; NFI = .97; TLI = .98, CFI = .99, IFI = .99; RMSEA = .04; α for presence subscale = .86; α for search subscale = .86; Sample 3 [$N = 402$]: $\chi^2 = 149.59$, $p < .001$; GFI = .93; AGFI = .89; NFI = .92; TLI = .91, CFI = .93, RMSEA = .09; α for presence subscale = .82; α for search subscale = .87). More than the factor adequacy of the scale, the MLQ also presented adequate convergent and discriminant validity. Using a Multi-Trait Multi-Method matrix (MTMM), the authors tested to what extent the MLQ presented better convergent and discriminant validity than the two most widely used MIL measures (PIL-Test and LRI). The results showed that the MLQ correlated as expected with a number of well-being, personality, and religiosity variables, and presented better discriminant validity than the PIL-Test and the LRI (for more information, see Steger et al., 2006).

The MLQ offered several improvements over current meaning in life measures, which included no item overlap with related measures, a stable factor structure, better discriminant validity, a briefer format, and the possibility to measure the search for meaning in the same questionnaire (Steger et al., 2006). By now, the instrument has been validated and used in several other cultures, such as: Argentina (Góngora & Solano, 2011); China (Liu & Gan, 2010); Japan (Steger, Kawabata, Shimai, & Otake, 2008); Spain (Steger, Frazier, & Zacchanini, 2008). The psychometric properties of the MLQ in these studies are very similar. Exploratory factor analysis presents a two-factor solution as the most reliable to the data. Goodness-of-fit indexes present adequate fit, although RMSEA tend sometimes to be high (Góngora & Solano, 2011; Steger et al., 2006).

CURRENT STUDY

The objective of this study is twofold: 1) To present the psychometric properties of the Brazilian version of the Meaning in Life Questionnaire (MLQ-Brazil), using robust analytical methods in a large nationwide Brazilian sample; and 2) to evaluate the levels of MIL in Brazil regarding some sociodemographic variables.

METHOD

Translation and Adaptation Processes of the MLQ

The translation and adaptation process of the original MLQ to the Brazilian-Portuguese included several steps, based on the International Test Commission guidelines (ITC, 2010) and on Borsa, Damásio and Bandeira (2012). Initially, the questionnaire was translated from English to Portuguese by two independent translators who were instructed to emphasize the meaning and not literal expressions on the translations. With these two initial versions, the authors conducted a synthesis of the instrument. This synthesis was evaluated by a target-group ($N = 4$) and by a group of three researchers, psychologists and experts in psychometric evaluation. After minor revisions of grammatical aspects, the adapted version was back-translated from Portuguese to English by a third independent translator. The original and the back-translated version were evaluated by the authors and a group of researchers. By considering the versions both grammatically and semantically equivalent, the instrument was considered ready to use (Annex A).

Participants

Participants were 3.020 subjects (63.9% women), ranging in age from 18 to 91 ($M = 33.92$; $SD = 15.01$) years old, from 22 Brazilian states. From the total, 60% was single, 27.3% was married, 6.0% was divorced, 5.2% was in stable relationship (dating, engaged, or living with a partner), and 1.5% was widowed. Participants were invited to collaborate with the study through different sources. A total of 91.4% answered the questionnaires in a web-based platform, whereas the remaining 8.6% responded to the questionnaires in the paper-and-pencil form. Invitations were sent through different sources, such as personal and media invitations, recruitment within social and occupational institutions (specially the adults and the elderly), as well as snowball technique (Patton, 1990).

Instruments

Meaning in Life Questionnaire: The MLQ is a 10-item instrument that encompasses two different constructs: Presence of meaning – MLQ-P (e.g., “My life has a clear sense of purpose”) and search for meaning – MLQ-S (e.g., “I am seeking a purpose or mission for my life”). Each construct is evaluated five items. In previous studies (Góngora & Solano, 2011; Liu & Gan, 2010; Steger et al., 2006; Steger, Frazier, & Zacchanini, 2008; Steger, Kowabata,

Shimai, & Otake, 2008) the questionnaire presented acceptable psychometric properties in terms of reliability and goodness-of-fit.

Subjective Happiness Scale (SHS, Lyubomirsky & Lepper, 1999, Brazilian version adapted by Damásio, Zanon, & Koller, 2012) is a 4-item Likert-type scale (ranging from 1 to 7 points, with different anchors), which assesses subjective happiness by a single-factor solution. In this study, the SHS presented excellent goodness-of-fit indexes: CFI = 1.00; TLI = .99; RMSEA (90% CI) = .037 (.017 - .061); SRMR = .042.

Satisfaction with Life Scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985, Brazilian version adapted by Gouveia, Milfont, Fonseca, & Coelho, 2009) is a 5-item Likert-type scale (ranging from 1 – totally disagree to 5 – totally agree), which assess satisfaction with life by a single-factor solution. In this study, the SWLS presented excellent goodness-of-fit indexes: CFI = 1.00; TLI = .99; RMSEA (90% CI) = .034 (.021 - .049); SRMR = .011.

Life Orientation Test-Revised, LOT-R - Scheier, Carver, & Bridges, 1994, Brazilian version adapted by Bastianello, Pacico, & Hutz, 2012): The LOT-R evaluates one's levels of optimism (e.g., "In uncertain times, I usually expect the Best") and pessimism (e.g., "I rarely count on good things happening to me"). It is composed by ten items (4 fillers), answered in a five-point Likert scale (0 = totally disagree; 4 = totally agree). The Brazilian version of the LOT-R was validated by Bastianello, Pacico, and Hutz (2012). In this study, the expected bi-factorial solution presented excellent goodness-of-fit indexes: CFI = .98; TLI = .97; RMSEA (90% CI) = .068 (.057 - .078); SRMR = .036.

Data Analysis

Exploratory Factor Analysis

In order to identify the MLQ factor structure and its adequacy, the total sample was randomly split in two halves. With the first half of the sample ($n_1 = 1503$), an exploratory factor analysis (EFA), using the Weighted Least Squares Mean and Variance-Adjusted (WLSMV) extraction method with an oblique rotation (Geomin), was conducted for both scales together (10 items). The WLSMV was designed to be implemented into a polychoric correlation matrix, specifically to be used with ordinal data (Muthén & Muthén, 2010). Factor retention criterion was the Hull Method (HM, Lorenzo-Seva, Timmerman, & Kiers, 2011). At the present, the HM has proved to be the most reliable factor retention method (Lorenzo-Seva et al., 2011). We expected a clear two-factor solution, in which the five items of each subscale load on different factors, with no significant cross-loadings (i.e., cross-loading > .40).

Simple and Multigroup Confirmatory Factor Analyses

With the second half of the sample, three CFA were conducted. The first CFA tested the exploratory model, with both MLQ-P and MLQ-S factors together in the same measurement model. Two further CFA were conducted for each subscale separately, once presence of meaning and search for meaning represent two different constructs (Steger et al., 2006). The robust maximum likelihood extraction method (i.e., with corrections to data non-normality, Satorra & Bentler, 2001) was used in the CFAs. Fit indices used were: chi-square (χ^2) significant test, root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), the comparative fit index (CFI), and the Tucker-Lewis index (TLI). According to several guidelines, the χ^2 value must be non-significant, providing evidences that the observed matrix is significantly not different from the population matrix. The SRMR value must be of less than .08, and an RMSEA value must be of less than .06 or .08 (with higher-bound 90% confidence interval not exceeding .10). The CFI and TLI values should be greater than .90 (preferably greater than .95; Brown, 2006).

Multigroup confirmatory factor analyses (MGCFA), with the total sample, were performed to evaluate the measurement invariance of both MLQ subscales (MLQ-P and MLQ-S) across gender (female, $n = 1936$; male, $n = 1.084$) and age groups (youngsters, from 18 to 29 years old, $n = 1.622$; adults, from 30 to 59 years old, $n = 1.109$; and the elderly, more than 60 years old, $n = 289$). The age groups were defined according to the Brazilian Institute of Geography and Statistics (IBGE) guidelines (IBGE, 1999).

The MGCFA tested the measurement invariance and structural invariance within five model parameters: Model 1 (unconstrained model/configural invariance) assessed whether the scale configuration (number of factors and items per factor) was acceptable for both groups (gender and age). If the model is not supported, then the instrument's factor structure cannot be considered equal for the evaluated groups. Model 2 (equal factor loadings/metric invariance) analyzed whether the items' factor loadings were equal across groups, which can determine whether biases exist in the responses to one or more items. Model 3 (equal intercepts/scalar invariance) investigated whether the initial level of the latent variable was equal among the different groups. Model 4 (equal factor covariance/structural invariance) assessed to what extent the variance of the latent variables were equal across groups. Finally, Model 5 (residual invariance) evaluated whether the measurement errors (item residuals) were equal among groups. The assessment levels of the models were ordered hierarchically. Each constrained model was nested within a less restricted one (Cheung & Rensvold, 2002).

The goodness-of-fit of the unconstrained model was evaluated using the chi-square/degree-of-freedom ratio (χ^2/df), the standardized root mean square residual (SRMR), the comparative fit index (CFI), the Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA). According to several guidelines, the χ^2/df may be less than 2 or 3; the SRMR should be close to 0; the CFI and TLI must be higher than .90 or .95 or close to it, and RMSEA values that are less than .05 indicate a good fit, whereas those between .05 and .08 are a reasonable fit. The CFI difference test (ΔCFI) evaluated differences between the models. Measurement invariance of the constrained models was evaluated using the CFI difference test (ΔCFI , Cheung & Rensvold, 2002). Significant differences observed between the goodness-of-fit indices of the models ($\Delta CFI > .01$) indicate that measurement invariance could not be achieved in the evaluated parameter.

Convergent and Discriminant Validity

Convergent validity was assessed using the LOT-R (pessimism and optimism), the SWLS, and the SHS. We expect positive and low-to-moderate correlations among the MLQ-P subscale and the SHS, SWLS and LOT-R optimism, and negative correlations with LOT-R pessimism. Regarding MLQ-S subscale, we expect negative and low correlations with SWLS, SHS, LOT-R optimism, and positive correlations among MLQ-S and LOT-R pessimism.

Meaning in life Questionnaire and Sociodemographic Variables

In order to evaluate the MLQ scores in the Brazilian population, we sought to examine its relation regarding some sociodemographic variables: 1) gender; 2) age; and 3) marital status. A multivariate analysis of variance (MANOVA) was performed with gender, age and marital status as independent variables (IVs). A bootstrapping procedure (1.000 re-samplings, with a 99% confidence interval for the mean difference, ΔM) was employed to achieve greater reliability to the results, to correct the non-normal distribution of the sample and the difference in group sizes, and to present a confidence interval of 99% for the mean differences (Haukoos & Lewis, 2005). Effect sizes were calculated by the eta-squared (η^2).

RESULTS

Exploratory and Confirmatory Factor Analysis

According to the Hull Method, the two-factor solution was presented as the most reliable to the data. The EFA provided a clear two-factor solution, with the search and presence items loading satisfactorily in the expected factors.

With the second half of the sample, three different CFA evaluated the goodness-of-fit indexes of the exploratory obtained solution, and of concurrent models. For the first model, the χ^2 was highly significant ($p < .0001$). Comparative fit indexes (CFI and TLI) were excellent. However, RMSEA and SRMR presented high levels of residuals (See Table 2).

An in depth examination of these results, using the Langrage Multiplier test (LM test) showed that many changes in model parameters were suggested in order to reduce model discrepancy, reduce the chi-square value, and, therefore, achieve adequate RMSEA and SRMR indexes (for more informations on the mathematical approach behind the SRMR and RMSEA, see Brown, 2006). In order of importance, these parameters were: F2 \rightarrow v2 ($\chi^2 = 340.917, p < .001$); F2 \rightarrow v10 ($\chi^2 = 159.886, p < .001$); F2 \rightarrow v9 ($\chi^2 = 109.359, p < .001$); F1 \rightarrow v6 ($\chi^2 = 45.683, p < .001$); F1 \rightarrow v9 ($\chi^2 = 42.320, p < .001$).

Table 1.

Exploratory Factor Analysis of the MLQ ($n_1 = 1503$)

Items	Factors	
	MLQ-S	MLQ-P
MLQ-10	.888	-.117
MLQ-8	.866	.003
MLQ-3	.755	.154
MLQ-7	.690	.271
MLQ-2	.678	-.367
MLQ-4	.062	.878
MLQ-1	.017	.842
MLQ-6	-.088	.789
MLQ-5	-.004	.782
MLQ-9	.120	-.726
Eigenvalue	3.73	3.03
Alpha reliability	.85	.88
Explained variance	37,31%	30,33%
Factor correlation	-0.09 (n.s) ^a	

Note: MLQ – Meaning in Life Questionnaire; MLQ search for meaning subscale; MLQ-P – MLQ presence of meaning subscale; ^a n.s – non-significant.

In synthesis, these modifications indexes are suggesting that allowing cross-loadings among MLQ-P and MLQ-S would significantly increase model fit. This result was expected since MLQ-P and MLQ-S are although different, related constructs.

Considering these results, we evaluated the fit indexes of the MLQ subscales separately, and two further CFA were conducted. As can be seen in Table 2, the MLQ-P subscale presented excellent fit indexes. For the MLQ-S subscale, fit indexes were adequate, except the RMSEA that still presented high levels of residuals. Trying to comprehend this result, the LM test was again employed. The test showed that several error variances should be correlated in order to reduce chi-square value and improve model fit. In order of importance, these errors were: E3 \leftrightarrow E7 ($\chi^2 = 235.040, p < .001$); E7 \leftrightarrow E10 ($\chi^2 = 103.826, p < .001$); E10 \leftrightarrow E2 ($\chi^2 = 82.598, p < .001$); E3 \leftrightarrow E10 ($\chi^2 = 22.238, p < .001$); E8 \leftrightarrow E10 ($\chi^2 = 21.660, p < .001$); E3 \leftrightarrow E2 ($\chi^2 = 20.249, p < .001$); E8 \leftrightarrow E2 ($\chi^2 = 16.528, p < .001$). Note that each error term is linked to its correlated variable. For example, E8 refers to the error of variable 8 of the MLQ.

Once the objective of this study was not to refine the MLQ, and considering that error correlations are just methodological artifact to improve model fit (Cole, Ciesla, & Steiger, 2007), these modifications were not employed.

Table 2.

Confirmatory Factor Analyses of the MLQ ($n_2 = 1.517$)

	Goodness-of-fit indexes				
	χ^2 (df)	CFI	TLI	RMSEA (90% C.I)	SRMR
2 correlated factors	751.173 (34)	.94	.92	.118 (.111 - .125)	.129
Separated factors					
MLQ-P	49.413 (5)	.99	.99	.075 (.058 - .095)	.002
MLQ-S	172.440 (5)	.97	.95	.149 (.130 - .168)	.058

Note: MLQ search for meaning subscale; MLQ-P – MLQ presence of meaning subscale; χ^2 – chi-square; df – degrees of freedom; CFI – comparative fit index; TLI – Tucker-Lewis Index; RMSEA – Root Mean Square error of approximation; C.I – confidence interval; SRMR – standardized root mean-square residual.

Multigroup Confirmatory Factor Analysis (MGCFA)

In order to evaluate the measurement invariance of both the MLQ-P and MLQ-S subscales across gender and age groups (youngsters, adults, and the elderly), a set of MGCFA analyses were conducted.

Initially, we sought to evaluate the baseline models for gender and for the different age groups. As can be seen in Table 3 and Table 4, adequate fit indexes were achieved both male and female, and youngsters, adults, and the elderly on both the MLQ-P and MLQ-S. As previously noted, however, the RMSEA values for the MLQ-S were high for all subgroups.

Regarding measurement and structural invariance, full invariance was achieved for both MLQ-S and MLQ-P subscales, providing evidences that the MLQ-P and MLQ-S are not biased in any parameter nor male or female, neither for youngsters, adults, and the elderly. The acceptable fit indexes for Model 1 (unconstrained model) demonstrate that the initial proposed model is plausible for all subgroups, fulfilling the configural invariance criteria (Brown, 2006; Cheung & Rensvold, 2002). Model 2 (metric invariance) evaluated whether the item factor loadings were equivalent across groups. There was not a significant reduction in the fit of Model 2 compared to Model 1 nor in the MLQ-P neither in the MLQ-S. Because constraining the factor loadings to be equal across groups did not significantly reduce the fit indices, it can be concluded that the items present similar patterns of factor loadings across all tested groups. Therefore, there were no response biases for any of the items (Brown, 2006; Byrne, 2010). The fit for Model 3 (scalar invariance) showed that the intercepts of the items were equivalent for all groups in both MLQ-P and MLQ-S subscales, so that participants with the same level of the latent trait answered the questionnaire the same way. Once configural, metric and scalar invariance were achieved, group comparisons can be safely conducted, because no bias were found.

Full structural invariance was also achieved. Model 4 (structural invariance) showed that the latent variables variance were equivalent across all groups in both the MLQ-P and the MLQ-S subscales. Finally, the most restricted model (Model 5, residual invariance) presented evidences that the measurement errors for the items were also similar across all groups.

Table 3.

Fit Indexes for Gender MGCFA for the MLQ (N = 3.020)

Gender measurement invariance	Goodness-of-fit indexes				
MLQ-P	RMSEA (90% IC)	SRMR	TLI	CFI	ΔCFI
Male (<i>n</i> = 1.084)	.076 (.054 - .100)	.023	.991	.995	-
Female (<i>n</i> = 1936)	.065 (.048 - .082)	.089	.993	.996	-
Unconstrained model	.061 (.052 - .071)	.020	.970	.985	-
Metric invariance	.053 (.045 - .061)	.021	.978	.984	.001
Scalar invariance	.050 (.043 - .057)	.021	.980	.981	.003
Structural invariance	.049 (.043 - .057)	.023	.980	.980	.001
Residual invariance	.045 (.039 - .051)	.022	.984	.980	.000
Gender measurement invariance	Goodness-of-fit indexes				
MLQ-S	RMSEA (90% IC)	SRMR	TLI	CFI	ΔCFI
Male (<i>n</i> = 1.084)	.142 (.119 - .164)	.061	.976	.952	-
Female (<i>n</i> = 1936)	.145 (.128 - .145)	.056	.975	.950	-
Unconstrained model	.136 (.127 - .146)	.058	.846	.923	-
Metric invariance	.115 (.107 - .123)	.058	.889	.923	.000
Scalar invariance	.100 (.093 - .107)	.057	.916	.920	.003
Structural invariance	.112 (.104 - .119)	.058	.920	.920	.000
Residual invariance	.097 (.090 - .104)	.057	.936	.920	.000

Note: MLQ search for meaning subscale; MLQ-P – MLQ presence of meaning subscale; RMSEA - root mean-square error of approximation; SRMR - standardized root mean-square residual; CFI - comparative fit index; TLI - Tucker-Lewis index.

Table 4.

Fit Indexes for Age MGCFA for the MLQ (N = 3.020)

Gender measurement invariance		Goodness-of-fit indexes				
MLQ-P	RMSEA (90% IC)	SRMR	TLI	CFI	ΔCFI	
Youngsters (<i>n</i> = 1.622)	.072 (.054 - .091)	.022	.991	.996	-	
Adults (<i>n</i> = 1.109)	.077 (.055 - .101)	.023	.990	.995	-	
Elderly (<i>n</i> = 289)	.010 (.000 - .083)	.016	1.000	1.000	-	
Unconstrained model	.045 (.038 - .051)	.026	.975	.979	-	
Metric invariance	.041 (.035 - .047)	.027	.979	.980	.001	
Scalar invariance	.052 (.047 - .057)	.025	.976	.976	.004	
Structural invariance	.052 (.047 - .057)	.028	.976	.975	.001	
Residual invariance	.053 (.048 - .058)	.027	.975	.972	.003	
Gender measurement invariance		Goodness-of-fit indexes				
MLQ-S	RMSEA (90% IC)	SRMR	TLI	CFI	ΔCFI	
Youngsters (<i>n</i> = 1.622)	.139 (.121 - .158)	.053	.954	.977	-	
Adults (<i>n</i> = 1.109)	.158 (.136 - .180)	.063	.953	.974	-	
Elderly (<i>n</i> = 289)	.121 (.078 - .169)	.059	.943	.972	-	
Unconstrained model	.090 (.084 - .097)	.060	.898	.915	-	
Metric invariance	.084 (.078 - .089)	.061	.912	.915	.000	
Scalar invariance	.076 (.072 - .081)	.061	.927	.915	.000	
Structural invariance	.076 (.071 - .081)	.060	.928	.914	.001	
Residual invariance	.072 (.067 - .076)	.061	.936	.914	.001	

Note: MLQ-S – MLQ search for meaning subscale; MLQ-P – MLQ presence of meaning subscale; RMSEA - root mean-square error of approximation; SRMR - standardized root mean-square residual; CFI - comparative fit index; TLI - Tucker-Lewis index.

Convergent Validity

Convergent validity was assessed using the total sample. As expected, MLQ-P correlated positively with all subscales, except for MLQ-S and LOT-R pessimism. On the other hand, MLQ-S correlated negatively with MLQ-P, SWLS and SHS, and positively with LOT-R pessimism. However, no significant correlation was found between MLQ-S and LOT-R optimism.

In order to evaluate possible differences in the magnitude of the correlation coefficients with the convergent measures, we used the Fisher r-to-z transformation test (Cohen & Cohen, 1983) for both the MLQ-P and MLQ-S separately. For both scales, no significant differences were found for any comparison. Thus, the levels of correlations among both the MLQ-P and MLQ-S with the convergent measures were statistically equivalent.

Table 5.

Convergent Validity of the MLQ with SWLS, SHS and LOT-R (N = 3.020)

	Correlations					
	1	2	3	4	5	6
1. MLQ-P	1	-.117**	.551**	.539**	-.403**	.444**
2. MLQ-S	-	1	-.148**	-.161**	.137**	-.035
3. SWLS	-	-	1	.660**	-.389**	.448**
4. SHS	-	-	-	1	-.464**	.534**
5. LOT-R-Pess	-	-	-	-	1	-.532**
6. LOT-R-Optim	-	-	-	-	-	1

Note: MLQ-P = MLQ presence of meaning subscale; MLQ-S = MLQ search for meaning subscale; SWLS = Satisfaction with Life Scale; SHS = Subjective Happiness Scale; LOT-R-Pess = Life Orientation Test – Revised pessimism subscale; LOT-R-Optim = Life Orientation Test – Revised optimism subscale; ** = $p < .001$;

MLQ and Sociodemographic Variables

We sought to examine the relation of the MLQ-P and MLQ-S with sociodemographic variables (age groups, gender and marital status). In order to easily comprehend the results, Table 6 presents descriptive statistics for all evaluated groups.

Significant main effects were found for marital status [$F(8, 5.928) = 7.662$; Wilk's Lambda = .98; $p < .001$; $\eta^2 = .01$], but not for gender [$F(2, 2.963) = 0.05$; Wilk's Lambda = 1.00; $p = .995$; $\eta^2 = .00$] or age groups [$F(4, 5.928) = 1.366$; Wilk's Lambda = 1.00; $p = .243$; $\eta^2 = .00$].

Post-hoc tests for marital status on the MLQ-P showed that single people had lower levels of meaning in life when compared to all other marital statuses (stable relationship, $p < .05$; married, $p < .001$; divorced, $p < .001$; and widowed, $p < .001$). Married people presented higher levels of meaning in life than single people ($p < .001$) and couples on stable

relationship ($p < .001$). Widowed and people on stable relationships people presented higher levels of meaning in life when compared to the single ones ($p < .001$). No significant differences were found among married and widowed ($p = .95$); widowed and divorced ($p < .001$); and divorced and stable relationship ($p = .67$).

Table 6.

Descriptive Statistics for MLQ-P and MLQ-S Regarding Gender, Age, and Marital Status

Variables	MLQ-P	MLQ-S
	Mean (SD)	Mean (SD)
Gender		
Male	24.12 (6.65)	22.73 (7.16)
Female	25.34 (6.32)	23.46 (7.11)
Age		
Youngsters	23.57 (6.56)	23.55 (6.86)
Adults	26.45 (5.98)	22.74 (7.45)
Elderly	26.47 (6.10)	22.97 (7.20)
Marital status		
Single	23.64 (6.56)	23.86 (6.79)
Stable relationship	25.10 (6.35)	21.95 (7.45)
Married	27.30 (5.68)	22.04 (7.54)
Divorced	25.96 (5.81)	22.77 (7.37)
Widowed	27.84 (5.21)	22.91 (7.47)

Regarding MLQ-S, single people presented higher levels of search for meaning when compared to the married ($p < .001$) and people on stable relationship ($p < .001$). Interaction effects were found only for gender x age for the MLQ-S [$F(2, 2964) = 3.449, p < .05$]. Subsequent analyses showed that, for women, the youngsters ($M = 24.06; SD = 6.64$) presented higher levels of search for meaning when compared to the adults ($M = 22.80; SD = 7.58; p < .001$) and the elderly ($M = 22.67; SD = 7.42; p < .05$). No such differences were found for the men.

DISCUSSION

Initially, we evaluated the psychometric properties of the MLQ. The EFA found an expected two-factor solution as the most reliable to the data. Search for meaning and presence of meaning were presented as different constructs. Alpha reliability for both the MLQ-P and MLQ-S were satisfactory. In order to test the adequacy of the obtained exploratory solution, three different CFAs were executed. The first CFA, which employed both the MLQ-P and MLQ-S into a single analysis, found acceptable fit indexes. Nonetheless, the RMSEA and SRMR presented high levels of residuals. These results suggest that to introduce different but related constructs into a single CFA can worsen the results.

The CFA is a technique which aims to evaluate the adequacy of measurement models. Differently from EFA, in the CFA context, if the researcher does not explicitly allow cross-loadings among the items, the cross-loadings are fixed to 0 (Brown, 2006). To implement related but different constructs into a single CFA analysis, and to maintain possible cross-loadings fixed to 0 may increase the likelihood of residuals, since modifications indexes are prone to suggest that freeing some constraints would favor the model. This is exactly what happened in this case.

It is important to emphasize that in other MLQ validation studies, the RMSEA values were also high. In the original study (Steger et al., 2006), the largest sample ($N = 402$) achieved a marginal RMSEA value (.09; C.I not presented). In the Argentinean MLQ validation study (Góngora & Solano, 2011), once again RMSEA values were high (.11 for adults; .08 for youngsters; C.I not presented). Although the authors have not discussed in depth these results, it is possible that the reasons are not different from those found in this study. Thus, we argue that future studies aiming to present CFA results for the MLQ would benefit of evaluating MLQ-P and MLQ-S separately.

Another point to take into consideration is the fact that when evaluated separately, the MLQ-S scale still presented high levels of residuals, as pointed out by the RMSEA value. The LM test provided evidences that many error variances should be correlated in order to improve model fit. As mentioned earlier, we did not implement any of these suggestions because to correlate error variances would just increase model fit, without improve the questionnaire itself (Cole et al., 2007). At this point, a special attention must be given to the fact that, in general, correlated error variances tend to suggest two possible issues: 1) Overlap content among the items, and 2) Neglected latent factors in the model that could be explaining

the residual variance of the items, not explained by the search for meaning construct (Brown, 2006).

A qualitative observation of the MLQ-S items led us to believe that items were written with such a similar fashion that might be resulting in overlapping content. Although other fit indexes presented excellent results, refinement procedures (probably excluding redundant items or modifying item sentences) can improve the MLQ-S.

Regarding the MGCFA, the Brazilian MLQ presented full measurement and structural invariance in all tested groups. This result showed that the MLQ might be implemented for both male and female from all age groups (+18 years old). This represents an important quality indicator of the questionnaire, since groups comparisons can be safely conducted, without suffering from response bias. More than that, the questionnaire reliably serves for using in a wide variety of ages in the Brazilian context.

Convergent validity of the Brazilian MLQ was also achieved. Expected correlations were found among the majority of the indicators. The magnitude of these correlations ranged from low to moderate. This result was also expected once the MLQ was designed to control for overlap content with other related variables (Steger et al., 2006). Regarding the magnitude of the convergent correlations, no differences were found nor for the MLQ-P and for MLQ-S. In other words, the levels of the correlations with the convergent variables were statistically similar, influencing (or being influenced) by the MLQ factors to the same level.

A curious result was found within the MLQ-S and the LOT-R. Table 5 showed that the levels of search for meaning was positively related to pessimism, but not negatively related to optimism. The differentiation between optimism and pessimism has a long trajectory in the psychological field (e.g., Marshal et al., 1992). Authors have argued that optimism reflect anticipation of positive events, and is related with positive personality dispositions such as extraversion and positive emotional states. On the other hand, pessimism can be viewed as the disposition to expected negative events, and is related with neuroticism and negative emotional states (Marshal et al., 1992). Considering that search for meaning is generally linked to negative emotional states, such as negative affect, fear, sadness and depression (Park, Park, & Peterson, 2010; Steger et al., 2006), the relation between MLQ-S and LOT-R-Pessimism is theoretically reasonable. Optimistics, in turn, tend to see the world more positively, and tend to have better psychological adjustment than pessimistic people (see Carver, Scheier, & Segerstrom, 2010, for a review). Thus, the non significant correlations among LOT-R-Optimism and MLQ-S can be comprehended in the basis that search for

meaning, as a negative aspect of psychological adjustment, has no relation with optimism, but only with pessimism.

Regarding the association of presence of meaning and search for meaning with sociodemographic variables, main effects were found only for marital status. Compared to all other categories, single people presented lower levels of presence of meaning. Similarly, they presented higher levels of search for meaning when compared to the married and people on stable relationship. These results are consistent with a large well-being literature which presents that single people are prone to have lower levels on general well-being, including both psychological and subjective well-being (Coombs, 1991; Diener, Gohm, Suh, & Oishi, 2000; Sharp & Ganong, 2011).

Married people presented higher levels of meaning in life when compared to the single ones and couples on stable relationship. This result is equivalent with the one's found by Schnell (2009) in a representative German sample. According to the author, the marriage can highlight a *belonging* sensation, enhancing life goals more objectively, through the aim of building a home, raising children, and the experience of significance through responsibility for children, for example (Schnell, 2009). In other words, marriage can still nowadays enhance a life-course perspective. Not by chance, people consistently present family as one of their main sources of meaning (e.g., Debats, 1999; Schnell, 2009).

Widowed and divorced people presented the same levels of meaning in life then the married ones. Regarding divorce, this result might be linked to the fact that although divorce is typically seen as a negative life event, well-being tends to increase after a relative short period of time after the event (Luhmann, Hofmann, Eid, & Lucas, 2012). Regarding the widows, because of a natural course of development, they tend to be old people. In these cases, studies have found that older people generally present adequate coping strategies when facing the challenges of a marital transition, resulting in resilient outcomes (Marks & Lambert, 1998; Ong, Bergeman, Bisconti, & Wallace, 2006). According to Park (2010), although stressful live events (such as the death of a spouse) can hamper well-being levels for a while, the notion that highly stressful events shatter global meaning is minimal. This happens because people tend to adapt themselves to negative life circumstances through different meaning-making processes (for more information, see: Joseph & Linley, 2005; Park, 2010).

With regard to the MLQ-S, our results showed that single people presented higher levels of search for meaning when compared to the married and people on stable relationships. This result seems to corroborate previous findings that having a partner (in this

case, a spouse, a boyfriend, a fiancé, etc.) provide sense of belonging, direction, and future-life perspective (Schnell, 2009). This might be the explanation to the fact that people in these situations presents less search for meaning.

Finally, young women presented higher levels of search for meaning when compared to adults and elderly women. Although age and search for meaning are only lowly correlated (Steger et al., 2006), this result might highlight developmental Brazilian issues. The transition phase that youngsters in general have to face presents many challenges, such as the choice of a career, first jobs, search for financial independence, etc. These challenges are still more difficult for women who, for cultural reasons, have to deal with higher social charges such as marriage, motherhood and the constitution of a family, household care, etc. On the other hand, women are nowadays achieving greater social and professional recognition. Not without a high effort, they are achieving high professionals' positions and leadership roles in various professional fields. Because of this amount of responsibility (and, more than that, because of their inner and social charges) they have to face mutual and sometimes conflicting goals (e.g., investing on a career and on their independence vs. investing on the constitution of a family). For these reasons, young women might present higher levels of search for meaning because of a conflicting future life perspective that, in Brazil, is more highlighted for women than for men.

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CAPÍTULO IV

ARTIGO III

SOURCES OF MEANING AND MEANING IN LIFE QUESTIONNAIRE (SOME): PSYCHOMETRIC PROPERTIES AND SOCIODEMOGRAPHIC FINDINGS IN A LARGE BRAZILIAN SAMPLE³

QUESTIONÁRIO DE FONTES DE SENTIDO E SENTIDO DE VIDA (SOME): PROPRIEDADES PSICOMÉTRICAS E ACHADOS SOCIODEMOGRÁFICOS EM UMA AMPLA AMOSTRA BRASILEIRA

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³ Artigo submetido para publicação

ABSTRACT

This study presents the psychometric properties of the Brazilian version of the Sources of Meaning and Meaning in Life Questionnaire (SoMe-BR). Participants were 3.034 subjects (63.9% women), ranging in age from 18 to 91 years. Reliability analysis, parallel analysis (PA), exploratory structural equation modeling (ESEM) and confirmatory factor analyses (CFA) were employed to evaluate the structure and reliability of the SoMe-BR. Through PA and ESEM, a five-dimension structure for the 26 sources of meaning was achieved. CFAs supported meaningfulness and crisis of meaning as two distinct constructs. Convergent validity within the SoMe-BR and between the SoMe-BR and other scales were also achieved. Regarding the SoMe scores and sociodemographic variables, significant main effects were found for gender, age groups and marital status. Our results corroborate the international literature, which claims in favor of the SoMe as a reliable measure to evaluate meaning in life contents in different cultural contexts.

Keywords: Meaning in life; meaningfulness; crisis of meaning; validation; SoMe.

INTRODUCTION

The notion that meaning in life (MIL) is an important construct for human well-being is not recent. In the first half of the 20th century, Frankl (1963, 1978) developed a robust theory emphatically defending the notion that having a sense of meaning was both a preventive and protective factor of human “existential suffering”. Since Frankl’s seminal work, several authors have struggled to comprehend and to clarify the concept of meaning in life (MIL, Cohen & Cairns, 2012). Although the definition of MIL varies across the field (Steger, Frazier, Oishi, & Kaller, 2006), it is widely accepted that MIL constitutes an important element of positive psychological functioning. Decades of research have provided evidence, showing that, for example, meaning in life and crisis of meaning impact on both physical (e.g., Korte, Cappeliez, Bohlmeijer, & Westerhof, 2012; Thompson, Coker, Krause, & Henry, 2003) and mental health (e.g., Fillion et al., 2009; Ho, Cheung, & Cheung, 2010; Rathi & Rastogi, 2007; Schnell, 2009; Steger & Frazier, 2005). More than that, empirical evidence has also suggested that in cases of stressful events, the presence of MIL can foster coping processes that result in resilient adaptations (Halama & Bakosová, 2009).

Besides the importance of MIL to human function, researchers have also focused their attention on understanding how people achieve the notion of a meaningful life (Steger, 2012). Theoretically, meaningfulness can be defined as a fundamental sense of meaning, based on an appraisal of one’s life as coherent, significant, directed, and belonging (Schnell, 2009). This – more or less implicit – evaluation is closely linked to the motivational component of sources of meaning, i.e. basic orientations that motivate commitment to and direction of different areas of life (Schnell, 2009). An in depth evaluation of this definition allows one to perceive that MIL combines a cognitive-evaluative and a motivational component. In coherence with this notion, other authors defined meaning in life as the “cognizance of order, coherence and purpose in one’s existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfillment” (Reker & Wong, 1988, p. 221).

Both definitions defend the notion that meaning in life is related to “characteristic commitments” (Schnell, 2009), or the “pursuit of worthwhile goals” (Reker & Wong, 1988). These worthwhile goals or commitments can be defined as life purposes (McKnight & Kashdan, 2009), which are linked to what people can define as their sources of meaning (Schnell, 2009).

Sources of meaning are strictly related to the motivational component of the MIL construct, and reflect the interaction of one’s needs and personal values. The sources, tied to a

system of personal values, direct individuals' actions, leading them to the quest and achievement of their significant life goals (Emmons, 2003; McKnight & Kashdan, 2006; Schnell, 2009). Sources of meaning can, thus, be considered as the cornerstone of meaning in life, by enabling a meaningful structuring of life without explicitly striving for meaning (Schnell, 2009).

By analyzing the sources of meaning through a developmental perspective, some authors have argued that they tend to vary throughout the lifespan, since they are associated with desires and aspirations related to each stage of life (Van Rast & Marcoen, 2000). Empirical research aiming to evaluate the relation between age and sources of meaning has found that older adults tend to perceive meaning in life more related to religious activities, social causes, self-transcendence, tradition, and cultural values. Younger adults, in turn tend to be more committed to the fulfillment of their basic needs and personal achievements (Reker, 1988). Other studies found that sources of meaning like 'personal achievements', 'personal development', and 'well-being' were significantly more related to youngsters when compared to the elderly (Prager, 1996). On the other hand, sources of meaning related to moral and human values, social causes, and financial security were more important to the elderly when compared to youngsters (Prager, 1996, 1997). In coherence with these findings, Schnell (2009) showed that self-transcendence and order tend to increase with age ($r = .30$ and $r = .36, p < .05$, respectively).

The psychometric evaluation of sources of meaning does not have a long tradition in the psychological literature. The first psychometric scale designed to evaluate sources of meaning was the Sources of Meaning Profile (SOMP-R, Reker, 1996). The SOMP-R is a 17-item questionnaire that evaluates four different sources of meaning, namely: self-transcendence, collectivism, individualism, self-preoccupation. Despite being the first scale to evaluate sources of meaning, it has not received wide acceptance in the literature, probably because it only assesses few sources of meaning. Considering this, Wong (1998) developed the *Personal Meaning Profile* (PMP), a 57-item questionnaire, which measures seven different sources of meaning: fulfillment, relationships, religiosity, self-transcendence, self-acceptation, intimacy and justice.

In 2006 and 2009, Schnell presented the English version of the *Sources of Meaning and Meaning in Life Questionnaire* (SoMe), a 151-item questionnaire which evaluates 26 different sources of meaning in life, as well as two other constructs: meaningfulness (a sense of fulfilment, based on significance, coherence, belonging, and belonging) and crisis of meaning (suffering from a lack of meaning in life). The questionnaire was developed based on

a large qualitative research program (Schnell, 2009) which used structured in-depth interviews and a laddering technique to “identify existentially relevant cognition (‘personal myth’), action (‘personal rituals’), and emotion (‘experiences of transcending’)” (Schnell, 2009, p. 487). After several processes of qualitative and quantitative analysis, 26 different sources of meaning were coded and then grouped into four high-order dimensions (Schnell, 2009): 1) self-transcendence (including religiosity, spirituality, social commitment, unison with nature, self-knowledge, health, generativity); 2) self-actualization (including challenge, individualism, power, development, achievement, freedom, knowledge, and creativity); 3) order (including tradition, practicality, morality, and reason); and 4) well-being and relatedness (including community, fun, love, comfort, care, attentiveness, and harmony).

Throughout years of refinement, the items for the 26 sources of meaning, the meaningfulness and crisis of meaning scales were examined and improved in several versions of the SoMe, resulting in the final version (Schnell, 2009). The SoMe presents several advantages when compared to the previously described scales. First, it evaluates a large number of sources of meaning (26), covering all existent categories in the literature (Debats, 1999; De Vogler & Ebersole, 1983; Ebersole, 1998; Emmons, 2003; Fiske & Chiriboga, 1991; McKnight & Kashdan, 2006; Prager, 1996; Reker & Wong, 1988). Secondly, each source of meaning is composed by a variety of items, thus enabling the measurement of underlying constructs. As aforementioned, the 26 sources of meaning are theoretically grouped in four higher-order dimensions (self-transcendence; self-actualization, order and well-being and relatedness), that have repeatedly been considered as reliable indicators of how people generate meaning in their lives (Emmons, 2003; Prager, 1996, 1997; Reker, 1988). More than that, the SoMe also evaluates the levels of meaningfulness and crisis of meaning by two factorially independent scales.

Meaningfulness can be comprehended as a basic trust, unconsciously shaping perception, action, and goal striving. Crises of meaning, in turn, are usually experienced consciously (Schnell, 2009). Theoretical and empirically, meaningfulness and crisis of meaning have been found to be two separated constructs. In Schnell (2009), confirmatory factor analysis supported the two-dimensional model ($\chi^2 = 158.57$; $df = 34$; $p < .000$; TLI = .94; CFI = .96; RMSEA = .08; CAIC = 220.57), whereas presented poor fit indexes for the one-dimensional model ($\chi^2 = 475.20$; $df = 34$; $p < .000$; TLI = .80; CFI = .84; RMSEA = .15; CAIC = 535.20).

Considering the importance of MIL in human life and the need for adequately evaluating the components of this construct, the objective of the present study is to present the

adaptation and translation process of the SoME to the Brazilian context, test its convergent validity, and evaluate the relations of the sources of meaning and meaning in life categories with sociodemographic variables.

METHOD

Brazilian Version of the Sources of Meaning and Meaning in Life Questionnaire (SoMe-BR): Adaptation Process

The translation and adaptation processes of the original SoMe to the Brazilian-Portuguese included several steps, based on the International Test Commission guidelines (ITC, 2010) and on Borsa, Damásio and Bandeira (2012). Initially, the questionnaire was translated from English to Portuguese by two independent translators who were instructed to emphasize the meaning and not literal expressions on the translations. When the translations were not compatible, an external judge verified the item in the original (German) version in order to identify the most reliable translation or to propose one third translation. Thus, in the adaptation process, the English and German versions of the SoMe were used. After the complete synthesis, the instrument was sent to a target-group ($N = 16$) to evaluate item comprehension. A total of 12 responses (from youngsters to elderly people) were obtained, presenting several contributions regarding the clarity, as well as grammatical, linguistic and semantic aspects of the items. In cases where changes were conducted, we mainly considered the original German version, to base the modifications.

After minor changes, a second version of the SoMe-BR was analyzed by four people, who completely understood the questionnaire. This adapted version was back-translated from Portuguese to English by an English native speaker. The original and the back-translated version were evaluated by the research team, in order to check for any serious discrepancy. After considering the versions both grammatically and semantically equivalent, the instrument was send to the original author (Schnell, personal conversation), who evaluated the back-translated version and answered 12 minor doubts about different aspects of the items that were not clear enough for the research team. After the final modifications, and after Schnell's agreement (Schnell, personal conversation), the questionnaire was considered ready to be used.

This study was approved by the Institutional Review Board (Ethics Committee) of the Federal University of Rio Grande do Sul (UFRGS), Brazil.

Participants

Participants were 3.034 subjects (63.9% women), ranging in age from 18 to 91 ($M = 33.90$; $SD = 15.01$) years old, from 22 Brazilian states. From the total, 59.9% was single, 27.3% was married, 6.1% was divorced, 5.2% was in a stable relationship (dating, engaged, or living with a partner), and 1.5% was widowed. Participants were invited to participate through different sources. A total of 91.4% completed the questionnaires on a web-based platform, whereas the remaining 8.6% responded to the questionnaire in the paper-and-pencil form. Invitations were sent through different sources, such as personal and media invitations, recruitment within social and occupational institutions (especially the adults and the elderly), as well as snowball technique (Patton, 1990).

Instruments

Bio-sociodemographic questionnaire: This instrument was developed to evaluate bio-sociodemographic characteristics of the sample (e.g., gender, age, marital status, educational level, financial income, job satisfaction, religiosity/spirituality, presence or absence of chronic illness and/or special needs, etc.).

Sources of Meaning and Meaning in Life Questionnaire (SoMe, Schnell & Becker, 2007; Schnell, 2009): The SoMe is a 151-item questionnaire, which evaluates 26 different sources of meaning (e.g., Morality: “Everyone needs clear values to hold on to”), and, independently of these, meaningfulness (e.g., “I lead a fulfilled life”) and crisis of meaning (e.g., “I feel pain from finding no purpose in my life”).

In the original study, exploratory factor analysis of the 26 sources of meaning (using oblique and orthogonal rotations) supported four higher-order dimensions (See Table 1). For further theoretically and practically useful differentiation, self-transcendence is subdivided into two minor categories: vertical self-transcendence, which is related to aspects of religiosity and spirituality, and horizontal self-transcendence that taps various forms of commitment that transcend self-related needs.

Items are rated on a 6-point type-Likert scale (0 – totally disagree; 5 – totally agree). The psychometric properties of the SoMe were established, among others, in a representative German sample ($N = 603$; Schnell, 2009). Alpha reliabilities are presented in Table 1. Besides the acceptable reliability indexes, the questionnaire presented acceptable temporal validity. Sources of meaning, meaningfulness and crisis of meaning presented a high short-term stability for two and six-months time interval: two-month test-retest stability coefficients average of .81 for the scales (sources of meaning, meaningfulness and crisis of meaning) and

.90 for the dimensions (self-transcendence, self-actualization, well-being and relatedness, and order); and .72 for the scales, and .78 for the dimensions for a six-month time interval (Schnell, 2009). Lastly, confirmatory factor analysis supported the expected bi-factorial structure for the meaningfulness and crisis of meaning scales [$\chi^2(158,57)$, $p < .001$; TLI = .94; CFI = .96; RMSEA = .07].

Adult Hope Scale (AHS, Snyder et al., 1991): The AHS is a 12-item Likert-type scale (ranging from 1 – totally false to 5 – totally true) with four items assessing agency, four items assessing pathways, and four distracters items that are not considered for analysis. Agency refers to the sense of successful determination to meet goals. Pathways refer to the capacity to generate successful plans to meet goals. In the current study, the goodness-of-fit indexes for the expected bi-factorial solution were: CFI = .98; TLI = .97; RMSEA (90% CI) = .071 (.064 - .077); SRMR = .052.

Life Orientation Test-Revised (LOT-R, Scheier, Carver, & Bridges, 1994): The LOT-R evaluates one's levels of optimism (e.g., "In uncertain times, I usually expect the Best") and pessimism (e.g., "I rarely count on good things happening to me"). It is composed by ten items (4 fillers), answered in a five-point Likert scale (0 = totally disagree; 4 = totally agree). In this study, the expected bi-factorial solution presented excellent goodness-of-fit indexes: CFI = .98; TLI = .97; RMSEA (90% CI) = .068 (.057 - .078); SRMR = .036.

Satisfaction with Life Scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985): The SWLS is a 5-item Likert-type scale (ranging from 1 – totally disagree to 5 – totally agree), which assess satisfaction with life by a single-factor solution. In the current study, the SWLS presented excellent goodness-of-fit indexes: CFI = 1.00; TLI = .99; RMSEA (90% CI) = .034 (.021 - .049); SRMR = .011.

Subjective Happiness Scale (SHS, Lyubomirsky & Lepper, 1999) is a 4-item Likert-type scale (ranging from 1 to 7 points, with different anchors), which assesses subjective happiness by a single-factor solution. In this study, the goodness-of-fit indexes of the SHS were: CFI = 1.00; TLI = .99; RMSEA (90% CI) = .037 (.017 - .061); SRMR = .042.

General Self-efficacy Scale (GSS, Schwarzer & Jerusalém, 1995) is a 10-item Likert-type scale (ranging from 1 – not at all true to 7 – Exactly true) which assesses general self-efficacy by a single-factor solution. In the current study, fit indexes were: CFI = .96; TLI = .97; RMSEA (90% CI) = .089 (.084 - .094); SRMR = .062.

Table 1

Dimensions, sources of meaning, number of items per scale, and reliability indexes (Schnell, 2009)

Dimensions	Sources of meaning	Items (<i>n</i>)	Alpha reliability
Self-transcendence	--	34	.89
			.84
<i>Vertical</i>	Explicit religiosity	3	.94
	Spirituality	5	.68
<i>Horizontal</i>	Social commitment	5	.87
	Unison with nature	5	.65
	Self-knowledge	6	.88
	Health	4	.87
	Generativity	6	.86
			.76
Self-Actualization	--	42	.93
	Challenge	5	.76
	Individualism	6	.68
	Power	5	.68
	Development	6	.81
	Achievement	4	.76
	Freedom	6	.91
	Knowledge	5	.69
	Creativity	5	.85
Order		24	.89
	Tradition	6	.79
	Practicality	8	.76
	Morality	5	.71
	Reason	5	.68
Well-being and Relatedness		41	.91
	Community	5	.77
	Fun	6	.71
	Love	4	.75
	Comfort	6	.75
	Care	4	.70
	Attentiveness	8	.69
	Harmony	8	.85

Data Analysis

Factor Structure and Reliability

First, an exploratory structural equation modeling (ESEM), using the robust maximum likelihood extraction method with oblimin rotation, was conducted in order to evaluate the factor structure of the 26 sources of meaning. The number of factors extracted was based on the parallel analysis criteria (Hayton et al., 2004). The ESEM approach (Asparouhov & Muthén, 2009) is a newly-developed technique that integrates the advantages of confirmatory factor analyses (CFA), structural equation modeling (SEM), and exploratory factor analyses (EFA) into a single analysis. Within this framework, one is able to compute standard errors for all rotated parameters, as well as goodness of fit indexes for the obtained exploratory solution (Asparouhov & Muthén, 2009). In this study, we evaluated the factor structure adequacy by implementing the root mean square error of approximation (RMSEA), comparative fit index (CFI) and the standardized root mean-square residual (SRMR). According to several guidelines, an acceptable model fit is indicated by an RMSEA value of less than .06 or .08 (with its 90% confidence interval lesser than .10), an SRMR value of less than .08, and by a CFI value equal or greater to .90 (Brown, 2006). Reliability indexes (alpha coefficient) were, then, calculated for all 26 sources of meaning, and for the obtained dimensions.

Confirmatory factor analyses were employed to test the distinction of meaningfulness and crisis of meaning as different constructs. Two models were evaluated: a one-dimension model, in which meaningfulness and crisis of meaning are grouped together into a single dimension, and a two-dimension model, in which meaningfulness and crisis of meaning are treated as related but distinct constructs. It is expected that the two-factor solution presents better fit indexes when compared to the one-dimension model.

Convergent validity

Convergent validity was examined by employing the SoMe-BR, SWLS, SHS, LOT-R, AHS, and SSS. More specifically, Pearson's correlations were calculated between the 26 sources and five dimensions of meaning, meaningfulness and crisis of meaning scales. Drawing on previous studies (Schnell, 2009, 2011), it is expected that all sources of meaning correlates positively with meaningfulness and negatively with crisis of meaning; that both horizontal and vertical self-transcendence dimensions presents higher correlational magnitudes with meaningfulness when compared to the other dimensions; and that meaningfulness and crisis of meaning do not overlap more than 50%.

Subsequently, the meaningfulness and crisis of meaning scales were correlated with the LOT-R, AHS, SWLS, SHS and SSS. We expected low-to-moderate correlations among these scales.

SoMe and Sociodemographic Variables

In order to evaluate the SoMe-BR in the Brazilian sample, we sought to examine its relation regarding the following sociodemographic variables: 1) gender; 2) age groups; and 3) marital status. The scalar age variable was transformed into three categories: youngsters (from 18 to 29 years old, $n = 1.631$; adults, from 30 to 59 years old, $n = 1.113$; and the elderly, more than 60 years old, $n = 290$). The age groups were defined according to the Brazilian Institute of Geography and Statistics (IBGE) guidelines (IBGE, 1999).

A multivariate analysis of variance (MANOVA) was performed with gender, age and marital status as independent variables (IVs). A bootstrapping procedure (1.000 re-samplings, with a 99% confidence interval for the mean difference, ΔM) was employed to achieve greater reliability to the results, to correct the non-normal distribution of the sample and the difference in group sizes, and to present a confidence interval of 99% for the mean differences (Haukoos & Lewis, 2005). Effect sizes were calculated by eta-squared (η^2).

RESULTS

Exploratory and Confirmatory Factor Analyses

In order to evaluate the optimal number of dimensions for the 26 sources of meaning, Parallel Analysis for factor retention was employed. PA results suggested a five-factor solution as the most representative to the data.

The obtained five-factor solution (See Table 2) is quite similar to the original factor-structure (Table 1) proposed by Schnell (2009). Minor differences, however, were found. Besides its original five sources of meaning, the dimension ‘horizontal self-transcendence’ incorporated four sources of meaning from other dimensions (creativity, knowledge, and development from “self-actualization”, and harmony from “well-being and relatedness”). Vertical self-transcendence and order remained the same. Self-actualization and well-being and relatedness remained the same, but without the aforementioned sources of meaning that merged into horizontal self-transcendence. Reliability indexes were satisfactory ($\alpha > .70$) for the majority of the sources of meaning, and acceptable (i.e., $0.6 \leq \alpha < 0.7$) for some (spirituality, unison with nature, individualism, power, knowledge, reason, and attentiveness).

Table 2.

Dimensions, sources of meaning, factor loadings, number of items per scale, and reliability indexes of the SoMe-BR

Sources of Meaning	Dimensions					Items (<i>n</i>)	Alpha Reliability
	WBR	HST	VST	SA	ORD		
Fun	.754	-	-	-	-	6	.71
Community	.745	-	-	-	-	5	.77
Love	.621	-	-	-	-	4	.69
Confort	.517	-	-	-	-	6	.60
Care	.513	.343	-	-	-	4	.75
Attentiveness	.401	-	-	-	-	8	.71
Self-knowledge	-	.633	-	-	-	6	.75
Social commitment	-	.615	-	-	-	5	.62
Development	-	.596	-	.315	-	6	.76
Knowledge	-	.594	-	.341	-	5	.66
Generativity	-	.557	.312	-	-	6	.75
Unison with nature	-	.523	-	-	-	5	.85
Harmony	.333	.519	-	-	-	8	.88
Creativity	-	.456	-	-	-	5	.85
Health	-	.445	-	-	-	4	.68
Spirituality	-	-	.866	-	-	5	.70
Religiosity	-	-	.776	-	-	3	.95
Individualism	-	-	-	.801	-	6	.61
Achievement	-	-	-	.618	.415	4	.72
Challenge	-	-	-	.586	-	5	.67
Freedom	-	-	-	.526	-	6	.89
Power	-	-	-	.513	-	5	.61
Moral	-	-	-	-	.661	5	.72
Reason	-	-	-	-	.660	5	.66
Practicality	-	-	-	-	.628	8	.71
Tradition	-	-	-	-	.597	6	.69
Alpha Reliability	.81	.84	.82	.78	.77	-	-

Note: WBR – Well-being and relatedness; HST – Horizontal self-transcendence; VST – Vertical self-transcendence; SA – Self-actualization; ORD – Order. In bold, items with higher

loadings on the factor, and considered in the factor structure. Results presented for loadings $\geq .30$.

The obtained five-factor solution presented acceptable goodness-of-fit indexes [RMSEA = .072 (90% C.I = .070 – 0.74); SRMR = .03; CFI = .90], suggesting acceptability of the five-factor model. The fit indexes, although acceptable, were marginal, which suggests that further refinement of the scales could improve the measurement model.

The distinction between meaningfulness and crisis of meaning scales was tested by two CFAs. As can be seen in Table 3, the two-dimensional model presented considerably better fit indexes when compared with the one-dimension model. RMSEA values, however, were high for both models.

Table 3.

Confirmatory factor analyses for different models for meaningfulness and crisis of meaning scales

Models	χ^2 (df)	<i>p</i>	TLI	CFI	RMSEA (90% CI)	CAIC
One-dimension model	1978.34 (35)	.001	.734	.793	.135 (.130 - .140)	1662.73
Two-dimension model	1218.50 (34)	.001	.954	.965	.107 (.102 - .112)	911.90

Note: χ^2 – chi-square; *df* – degrees-of-freedom; *p* – *p*-value; TLI – Tucker-Lewis index; CFI – comparative fit index; RMSEA – root mean square error of approximation; CI – confidence interval; CAIC – consistent Akaike’s information criterion.

Specifically regarding the two-dimension model, two error terms of the meaningfulness scale (error of item 85, “I feel I belong to something bigger than myself” and error term of item 113, “I think my life has a deeper meaning”) presented a significant modification index (MI = 1108.05, $p < .0001$). When this modification was considered, the two-dimension model presented the following fit indexes: χ^2 (*df*) = 600.79 (33), $p < .001$; TLI = .98; CFI = .98; RMSEA = .075 (.070 - .081); CAIC = 303.20. Meaningfulness and crisis of meaning were negatively correlated ($r = -.61$; $p < .001$).

Convergent validity between the SoMe-BR and other measures

First, we sought to examine to what extent the sources and dimensions of meaning were related to both meaningfulness and crisis of meaning. In this case, dimensions of meaning were calculated in accordance with the factor structure obtained in the present Brazilian sample. As can be seen in Table 4, all sources and dimensions of meaning are

positively correlated with meaningfulness. On the other hand, all sources and almost all dimensions of meaning (except self-actualization) are negatively correlated with crisis of meaning. However, many correlation coefficients are very low and cannot be interpreted as substantial (i.e., $r \leq .10$).

Fisher's *r*-to-*z* difference test (Cohen & Cohen, 1983) showed that horizontal self-transcendence provided higher predictive validity for meaningfulness when compared to all other dimensions of meaning (horizontal self-transcendence and vertical self-transcendence, $Z = 7.71$, $p < .001$; horizontal self-transcendence and self-actualization, $Z = 23.14$, $p < .001$; horizontal self-transcendence and well-being and relatedness, $Z = 10.86$, $p < .001$; horizontal self-transcendence and order, $Z = 16.80$, $p < .001$). Regarding crisis of meaning, the same was true: Horizontal self-transcendence presented higher predictive validity when compared to other dimensions (horizontal self-transcendence and vertical self-transcendence, $Z = 6.10$, $p < .01$; horizontal self-transcendence and self-actualization, $Z = 13.52$, $p < .001$; horizontal self-transcendence and well-being and relatedness, $Z = 4.19$, $p < .01$; horizontal self-transcendence and order, $Z = 8.09$, $p < .01$).

Correlations among meaningfulness and crisis of meaning, and the dimensions of meaning with convergent measures were also evaluated. As shown in Table 5, the Brazilian meaningfulness and crisis of meaning scales were substantially ($r > .30$) correlated with hope (agency and pathways), pessimism, optimism, satisfaction with life, subjective happiness and self-efficacy. The highest positive correlation was found between meaningfulness and satisfaction with life ($r = .54$, $p < .001$), and the highest negative correlation was found between crisis of meaning and subjective happiness ($r = -.63$, $p < .001$). Non-significant correlation was found only among pessimism and order ($r = -.01$, $p = \text{n.s.}$). As expected, none of the correlations exceeded an *r* value higher than .50.

Table 4

Pearson's correlations between the SOME-BR with meaningfulness and crisis of meaning

Dimensions	Sources of meaning	Meaningfulness	Crisis of meaning
Self-transcendence (horizontal)		.50**	-.17**
	Self-knowledge	.37**	-.08**
	Social commitment	.29**	-.12**
	Development	.54**	-.34**
	Knowledge	.21**	-.07**
	Generativity	.63**	-.30**
	Unison with Nature	.38**	-.18**
	Harmony	.58**	-.26**
	Creativity	.27**	-.11**
	Health	.40**	-.32**
Self-transcendence (vertical)		.62**	-.29**
	Spirituality	.42**	-.10**
	Explicit religiosity	.46**	-.20**
Self-actualization		.23**	-.03
	Individualism	.10**	-.06**
	Achievement	.21**	-.06**
	Challenge	.10**	-.04*
	Freedom	.10**	-.04*
	Power	.42**	-.28**
Well-being and relatedness		.48**	-.22**
	Fun	.28**	-.16**
	Community	.37**	-.23**
	Love	.23**	-.04*
	Comfort	.23**	-.10**
	Care	.39**	-.15**
	Attentiveness	.53**	-.23**
Order		.32**	-.12**
	Moral	.38**	-.17**
	Reason	.19**	-.11**
	Practicality	.23**	-.07**
	Tradition	.22**	-.04*

Note: ** $p < .001$; * $p < .01$

Table 5.

Pearson's correlations among the Brazilian structure of the SoMe and hope, pessimism, optimism, satisfaction with life, subjective happiness, and self-efficacy

SoMe		Agency	Pathway	Pessimism	Optimism	Satisfaction with life	Subjective happiness	Self-efficacy
Scales	Meaningfulness	.40**	.52**	-.38**	.46**	.54**	.52**	.39**
	Crisis of meaning	-.32**	-.50**	.48**	-.43**	-.60**	-.63**	-.36**
Dimensions	Vertical self-transcendence	.12**	.13**	-.13**	.25**	.15**	.19**	.08**
	Horizontal self-transcendence	.43**	.43**	-.25**	.34**	.32**	.31**	.40**
	Self-actualization	.31**	.32**	-.05**	.19**	.11**	.12**	.33**
	Well-being and relatedness	.28**	.31**	-.18**	.35**	.33**	.35**	.25**
	Order	.15**	.19**	-.01	.19**	.17**	.09**	.15**

*Note: ** $p < .001$*

SoMe-BR and Sociodemographic Data

We sought to examine the relation of the SoMe-BR with sociodemographic variables (age groups, gender and marital status). The descriptive statistics are presented in Table 6.

Significant main effects were found for gender [$F(7, 2.970) = 5.715$; Wilk's Lambda = .99; $p < .001$; $\eta^2 = .01$], age [$F(14, 5.940) = 3.052$; Wilk's Lambda = .99; $p < .001$; $\eta^2 = .01$], and marital status [$F(28, 10.709) = 5.738$; Wilk's Lambda = .95; $p < .001$; $\eta^2 = .01$]. No interaction effects were found.

Regarding meaningfulness, no differences were found between men and women ($p = .38$). The adults and the elderly presented higher levels when compared to the youngsters ($p < .001$). No significant differences were found between adults and the elderly ($p = 1.00$). Meaningfulness was also higher for married individuals, when compared to single and unmarried people ($p < .001$). Divorced and widowed individuals did not differ from the other categories ($p > .50$).

Crisis of meaning was higher for men than for women ($p < .001$). The youngsters presented higher levels when compared to both the adults and the elderly ($p < .001$), and no significant differences were found between the latter two groups ($p = 1.00$). Crisis of meaning was also higher for singles, when compared to married and divorced participants ($p < .001$). Married individuals also reported lower levels when compared to divorced and unmarried people ($p < .001$). No significant differences were found between widowed participants and any other group ($p = 1.00$).

Further exploratory analyses established the following associations between dimensions of meaning and demographics (after adjusting for alpha error accumulation):

Vertical self-transcendence was higher for women than for men ($p < .001$). It was lower for youngsters when compared to adults and the elderly ($p < .001$). No significant differences were found among adults and the elderly ($p = 1.00$). Singles also reported lower levels when compared to all other categories (married, widowed, and divorced; $p < .001$), except unmarried people ($p = 1.00$). Unmarried people also reported lower levels of vertical self-transcendence when compared to all other categories (married, divorced and widowed; $p < .001$), except singles ($p = 1.00$). Married people reported higher levels when compared to singles and unmarried people ($p < .001$), but no differences were found between married and widowed ($p = .10$) and divorced participants ($p = 1.00$).

For horizontal self-transcendence, no gender differences were found ($p = .27$). As for age, horizontal self-transcendence presented significant differences for all groups. The elderly reported higher levels when compared to both adults ($p < .001$) and the youngsters ($p < .001$),

and adults also presented higher levels than the youngsters ($p = 1.00$). Single people presented lower levels when compared to all other categories ($p < .001$), except unmarried people ($p = .92$). The widowed presented higher levels than the unmarried ($p < .01$).

Regarding self-actualization, men reported marginally significant higher scores when compared to women ($p = .056$), and the youngsters reported higher levels when compared to adults ($p < .001$) and the elderly ($p < .001$). No difference was found between the latter two groups ($p = .77$). Self-actualization was also higher for singles when compared to the married ($p < .001$) and the divorced ($p < .050$). Married participants also reported lower levels when compared to the unmarried ($p < .50$), and marginally lower scores when compared to the divorced ($p = 0.57$). No differences were found between the widowed and any other group ($p > .50$).

Well-being and relatedness was higher for women than for men ($p < .001$). No age ($p > .10$) and marital status ($p > .50$) differences were found. Lastly, for order, no significant results were found for gender ($p = .82$). For age, in turn, the elderly presented higher levels than adults ($p < .001$) and the youngsters ($p < .001$), and adults presented higher levels than the youngsters ($p < .001$). Regarding marital status, order was lower for singles when compared to all groups ($p < .001$), except the unmarried people ($p = 1.00$). The married reported higher scores when compared to singles, unmarried, and divorced ($p < .001$). Divorced people also reported higher scores when compared to singles and unmarried people ($p < .001$). The widowed, in turn, reported higher levels when compared to all other groups ($p < .001$).

Table 6.

Means and standard deviations for gender, age, and marital status groups

SoMe constructs	Gender			<i>p</i>	Age			<i>p</i>	Marital status					<i>p</i>
	Male	Female			Youngsters	Adults	Elderly		Single	Engaged	Married	Divorced	Widowed	
Scales														
Meaningfulness	3.62 (.82)	3.77 (.77)	<i>n.s</i>	3.60 (.81)	3.85 (.75)	3.86 (.73)	**	3.63 (.82)	3.65 (.84)	3.91 (.69)	3.74 (.78)	3.93 (.61)	**	
Crisis of Meaning	1.17 (1.19)	1.06 (1.12)	**	1.24 (1.19)	.93 (1.06)	1.00 (1.06)	**	1.28 (1.22)	1.05 (1.15)	.76 (.91)	1.03 (1.00)	1.04 (.98)	**	
Dimensions														
Vertical self-transcendence	1.98 (.99)	2.41 (.89)	**	2.09 (.97)	2.45 (.87)	2.50 (.92)	**	2.16 (.95)	2.03 (.99)	2.44 (.92)	2.44 (.81)	2.85 (.76)	**	
Horizontal self-transcendence	3.93 (.59)	4.02 (.55)	<i>n.s</i>	3.89 (.57)	4.09 (.54)	4.19 (.59)	**	3.92 (.57)	4.00 (.56)	4.11 (.56)	4.10 (.56)	4.28 (.58)	**	
Self-actualization	3.63 (.58)	3.57 (.60)	^a	3.66 (.57)	3.52 (.59)	3.46 (.64)	**	3.67 (.57)	3.57 (.65)	3.42 (.56)	3.54 (.59)	3.44 (.67)	**	
Well-being and relatedness	3.58 (.58)	3.76 (.55)	**	3.70 (.56)	3.68 (.56)	3.76 (.60)	<i>n.s</i>	3.70 (.57)	3.65 (.56)	3.72 (.56)	3.60 (.59)	3.80 (.60)	<i>n.s</i>	
Order	3.70 (.68)	3.77 (.67)	<i>n.s</i>	3.59 (.67)	3.90 (.60)	4.11 (.75)	**	3.63 (.67)	3.66 (.72)	3.96 (.64)	3.89 (.57)	4.40 (.63)	**	

Note: In parenthesis, standard deviations; ** $p < .001$; *n.s* – not significant result ($p > .05$); ^a – marginally significant result ($p = .056$).

DISCUSSION

As described in the results, the factorial structure of the SoMe-BR was very similar to the original structure (Schnell, 2009). From the 26 sources of meaning, only four were not retained in the expected dimensions. Vertical self-transcendence remained the same, encompassing both spirituality and explicit religiosity. Horizontal self-transcendence incorporated creativity, knowledge, and development from self-actualization, and harmony, from well-being and relatedness. In this study, the sources of meaning that comprised horizontal self-transcendence are, to a high extent, related to aspects of eudaimonic well-being, and still reflect the orientation beyond one's immediate needs, as proposed by Schnell (2009).

Curiously but not surprisingly, when compared to Schnell's (2009) findings, the dimension self-actualization "lost" three sources of meaning (related to eudaimonic well-being that merged with horizontal self-transcendence), and became clearly composed by self-centered sources of meaning, reflecting aspects of personal advancements or independence (e.g., individualism, power, freedom). In Schnell's (2009) study, the self-actualization dimension has blended both eudaimonic (e.g., knowledge, creativity, development) and self-centered (e.g., individualism and power) sources of meaning under one unique dimension. The dimension well-being and relatedness was very similar to the original, with the only difference that harmony merged with horizontal self-transcendence. Just as discussed by Schnell (2009), this source of meaning encompasses aspects of both personal (e.g., fun, comfort) and social (e.g., love, community; attentiveness) well-being. Lastly, order kept its four sources of meaning, clearly representing aspects related to moral values and prudence. Reliability analyses established adequate coefficients for the large majority of the evaluated sources. Some alpha coefficients were below .70 (but > .60), suggesting that further improvements of the Brazilian SoMe might increase reliability values.

In this study, the differentiation between meaningfulness and crisis of meaning was also supported. The corroboration of this result is particularly important, since the tradition of meaning in life research has posited a unique continuum from crisis of meaning to meaningfulness (Schnell, 2009, 2011). By evaluating meaningfulness and crisis of meaning as two different constructs, it is possible to correctly evaluate for whom and in what circumstances low levels of meaning in life really reflect a crisis of meaning (for more information on this distinction, see Schnell, 2010). This knowledge, for example, can serve as important background for meaning-centered interventions.

All sources and almost all dimensions of meaning were positive correlated with meaningfulness and negatively correlated with crisis of meaning. Just as in Schnell (2011), generativity and harmony were the two sources of meaning most closely related to meaningfulness. As previously mentioned, Fisher's r-to z transformation test showed that horizontal self-transcendence was the most "powerful" dimension of meaning, and provided higher predictive validity for both meaningfulness and crisis of meaning (in a negative perspective). This result was consistent with the literature. Other empirical studies have shown meaning in life is a construct strongly related to eudaimonic aspects of well-being (McMahan & Renken, 2011), such as generativity (Emmons, 2003), self-transcendence (Emmons, 2003; Reker & Wong, 1988; Schnell & Hoof, 2012), self-development (Ryan & Deci, 2001), etc.

In a theoretical perspective, Frankl (1963) posited that meaning in life could only be achieved within a eudaimonic approach, by looking beyond one's immediate needs (i.e., by self-transcendence). Although all sources of meaning are positively related with meaningfulness (what partially contradicts Frankl's position), our results suggests that focusing on eudaimonic aspects of well-being might be a powerful way for meaning achievement and for crisis of meaning prevention. Another important point to mention is the fact that self-actualization presented no correlations with crisis of meaning. This result seems to indicate that a commitment to self-focused endeavors does not prevent from existential suffering. Further studies, however, are necessary to corroborate this statement.

Regarding convergent validity, substantial correlations between the SoMe-BR meaningfulness and crisis of meaning scales with dispositional well-being aspects of personality (hope, optimism/pessimism, self-efficacy), and with subjective well-being (life satisfaction and subjective happiness) were established.

Exploratory analyses of associations between dimensions of meaning and well-being measures reflect strong links of hope and self-efficacy with horizontal self-transcendence and self-actualization. Optimism, satisfaction with life and subjective happiness were substantially associated with well-being and relatedness and horizontal self-transcendence.

As hypothesized, none of the correlations exceeded the expected value of .70. Empirically, this result indicates that the SoMe-BR is a reliable measure of meaning in life qualities and contents, and does not overlap with neighboring constructs. Regarding the SoMe-BR and sociodemographic data, several associations were established. Levels of meaningfulness were equivalent for both men and women. This result is not consensus in the literature. Some studies have found men having higher levels of meaning in life when

compared to women (Crumbaugh, 1968; Orbach, Iluz, & Rosenhein, 1987). Others have found women having slightly higher levels when compared to men (Schnell, 2009). Others, in turn, have found no significant differences (King, Hicks, Krull, & Del Gaiso, 2006; Scannell, Allen, & Burton, 2002; Steger et al., 2006). Those contradictory results might be related to cultural aspects, sample biases, or to measurement problems and errors.

Although we have found no significant differences in meaningfulness across gender, crisis of meaning was slightly higher for men. This result corroborates the notion that meaningfulness and crisis of meaning are two different constructs.

Regarding age, the youngsters presented lower levels of meaningfulness when compared to older people. The transition phase that youngsters in general have to face presents many challenges, such as the choice of a career, first jobs, search for financial independence, etc. Once meaningfulness is related to the pursuit and achievement of personal significant goals, it is expected that meaning in life tends to increase with age. This must be related to the fact that the youngsters are facing a life-stage transition, namely emerging adulthood (Arnett, 2000), in which personal life projects are in development. Furthermore, the younger youngsters are generally in a self-concept developmental phase, which implies they are solving the puzzle of “who am I in the world” (Schlegel, Hicks, King, & Arndt, 2011). Over time, people tend to establish a stable notion of them and to develop significant goals, thus aiding the achievement of a meaningful life.

Married people presented higher levels of meaningfulness and lower levels of crisis of meaning when compared to the other marital categories. The literature has shown that marriage can highlight a belonging sensation, enhancing life goals more objectively, through the aim of building a home or raising children, for example (Schnell, 2009). Thus, marriage can still nowadays enhance a life-course perspective.

Curiously, widowed and divorced individuals did not report different levels of meaningfulness or crisis of meaning when compared to both single and unmarried people, although divorce and the death of a spouse is typically seen as a negative life event. Regarding divorce, the literature has shown that well-being tends to increase again after a relative short period of time after the event (Luhmann, Hofmann, Eid, & Lucas, 2012). As regards widowed individuals, these, because of the natural course of development, tend to be older people. In these cases, studies have found that older people generally report adequate coping strategies when facing the challenges of a marital transition, resulting in resilient outcomes (Marks & Lambert, 1998; Ong, Bergeman, Bisconti, & Wallace, 2006). Park (2010), for example, has shown that although stressful live events (such as the death of a

spouse) can hamper well-being levels for a while, the notion that highly stressful events shatter global meaning is minimal. This happens because people tend to adapt to negative life events through different meaning-making processes (for more information, see: Joseph & Linley, 2005; Park, 2010).

Regarding the sources of meaning, women reported higher levels of vertical self-transcendence and well-being and relatedness. Religiosity and spirituality (components of vertical self-transcendence) are very important issues in Brazilian culture, with 92% of the population claiming to have a religion or spiritual belief (IBGE, 2010). According to the Brazilian Institute of Geography and Statistics (IBGE, 2010), for all groups of religion/spiritual beliefs, the number of women is higher. On the other hand, men are prevalent within the atheists, agnostics and nonreligious (IBGE, 2010). Our findings, thus, corroborate this data, which suggest that spiritual or religious beliefs are more preeminent and substantially more important among women than men.

Well-being and relatedness was also higher for women than for men. This result might reflect gender roles. For example, the dimension well-being and relatedness encompasses sources of meaning mainly related to social relationships, which might be more endorsed by women than by men. Consistent with these findings, self-actualization, a predominantly self-focused dimension, was higher for men than for women. Thus, the conjunction of these results provided evidence that women were more focused on social relationships and personal comfort, whereas men tended to be more self-focused. The finding is in line with the literature and replicates results from previous studies (Schnell, 2009; Schnell & Keenan, 2012).

Significant differences between the dimensions of meaning and age were also found. The youngsters reported lower levels in the majority of the dimensions of meaning (except self-actualization, in which this group was higher). Younger people, thus, tended to be less broadly committed or engaged, which might explain the reason why the youngsters reported both lower levels of meaningfulness and higher levels of crisis of meaning. As discussed by Schnell (2010), commitment to sources of meaning is the cornerstone of a sense of meaningfulness. Because youngsters are in a phase of development and/or transition of personal characteristics, shaping their “true-self” (Schlegel et al., 2011), this lack of commitment is comprehensible, albeit can reflect negatively and enhance existential conflicts typical of the youth (Fitzgerald, 2005).

Older people reported higher levels on the dimension order. This result corroborates a large body of research (Prager, 1996, 1997; Reker, 1988; Schnell 2009). It is possible that

developmental changes through the lifespan result in changes in commitment to different sources of meaning. However, longitudinal studies are necessary to evaluate this hypothesis.

Finally, the association among dimensions of meaning and marital status showed that singles presented lower levels in all dimensions, except self-actualization. Unmarried people also tended to report lower levels when compared to the other categories. These results are surely linked to age, with youngsters showing comparable values.

Married, widowed and divorced individuals, in turn, tended to present comparable patterns of commitment to sources of meaning. This suggests that engagement with dimensions of meaning might be more intrinsically related to personal values and life-stage aspects (such as age) than to external or relational influences.

This study has some limitations. First, our sample, albeit large, was not representative of the Brazilian population, which hampers generalization. The factor structure found in this study is a preliminary one, and it is possible that it may not be found in subsequent studies. Another problem is that all conclusions draw on self-report measurement. The inclusion of other designs, such as second-informants or an experimental design would strengthen the results of this study. Further studies are welcome to replicate or not the findings presented here.

CONCLUSIONS

In this study, we sought to present the validation process and the psychometric properties of the Brazilian version of the SoMe. Our results provided evidence that the SoMe is a reliable and comprehensive questionnaire to evaluate meaning of life qualities and contents. To a great extent, the results presented here were similar to those presented by Schnell (2009). This corroboration strengthens the notion that the SoMe is a reliable measure, and that the meaning in life construct can be reliably accessed by self-report inventories. The reported psychometric properties indicate that the conceptualization of meaning in life underlying the SoMe can validly be transferred to the Brazilian culture. Future studies aiming to contradict or corroborate, and expand the results presented here are welcome.

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CAPÍTULO V

ARTIGO IV

**VALIDATION AND PSYCHOMETRIC PROPERTIES OF THE BRAZILIAN
VERSION OF THE SUBJECTIVE HAPPINESS SCALE⁴**

**VALIDAÇÃO E PROPRIEDADES PSICOMEÉTRICAS DA VERSÃO BRASILEIRA
DA ESCALA DE FELICIDADE SUBJETIVA**

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ABSTRACT

This paper aimed to adapt the Subjective Happiness Scale to Brazil and gather evidences of construct validity to the scale. Participants were 600 subjects (50% men), aged from 18 to 70 years old ($M = 30.1$; $SD = 10.6$). Sample was split to cross-validate the results. Exploratory factor analysis ($n_1 = 300$) achieved a reliable single-factor solution, with all items loading satisfactorily on the factor. Confirmatory factor analysis ($n_2 = 300$) corroborated the single-factor solution with excellent goodness-of-fit indexes. Evidences of convergent validity are also provided with three related constructs: self-esteem, life satisfaction and hope. The adapted scale showed strong evidences of validity and seems appropriate to evaluate subjective happiness on Brazilian adults.

Key-words: subjective happiness scale; test adaptation; positive psychology; psychometrics

INTRODUCTION

The scientific study of happiness is one of the most challenging issues in psychological research. The construct has been investigated for at least 5 decades (Bradburn & Caplovitz, 1965; Diener, 1984; Kammann, Christie, Irwin, & Dixon, 1979), and has been influenced by other areas, such as Philosophy (Aristotle, 2011, in his *Nicomachean Ethics*, Sec. III a.C), Economics (Caporale, Georgellis, Tsitsianis, & Yin, 2009; Easterlin, McVey, Switek, Sawangfa, & Zweig, 2010; Graham, 2009), Psychiatry and Neurosciences in general (Kringelbach & Berridge, 2010; O'Connor, Dinan, & Cryan, 2011), to understand which are the constituents of happiness and how people can act toward its development.

During this period, several instruments were developed to evaluate this construct, such as: Affect Balance Scale (Bradburn, 1969), Affectometer (Kamman & Flett, 1983), Affective Intensity Measure (Larsen, 1984), Global Happiness Scale (Fordyce, 1977), Positive and Negative Affect Schedule (PANAS, Watson, Clark, & Tellegen, 1988). The main foundation of these questionnaires was the idea that happiness is the high frequency of positive affect (PA) and low frequency of negative affect (NA, Diener, 1984; Diener, Sandvik, & Pavot, 1991). Thus, many researchers used the index $PA - NA$ as a procedure to quantify happiness.

This idea, however, is not totally accepted (Kashdan, Biswas-Diener, & King, 2008; Ryan & Deci, 2001), once these authors have argued and provided empirical evidences that: 1) people who face negative events (and consequently negative affects) can present high levels of happiness depending on the meaning and adaptation process attributed to the situation or affect experienced (e.g., Larsen & Prizmic, 2008), and 2) not all positive affect leads directly to happiness increase, because of the phenomenon of hedonic adaptation (Lyubomirsky, 2010).

Nowadays, it is well-known that happy individuals are more successful across multiple life domains than unhappy ones (Liubomirsky, King, & Diener, 2005). In general, people tend to perceive themselves in positive affect states when important areas of their lives are going well. On this perspective, positive affect is a reflex of the positive evaluation of many different areas. These areas and their respective importance (such marriage, friendship, income, work performance, health, etc) are, however, different across cultures, so that it is quite difficult to cross-culturally compare the levels of happiness within a specific-domains approach (Diener, 2000). Thus, two main problems emerged in the definition and measurement of happiness: It could not be anymore defined as the single predominance of PA

over NA, and the measurement of specific domains could hamper and limit a global comprehension of happiness across different cultures.

The first approach to evaluate happiness in a non-theoretical perspective was proposed by Lyubomirsky and Lepper (1999). These authors presented a “subjective” measure of happiness, entitled Subjective Happiness Scale (SHS, Lyubomirsky & Lepper, 1999). This instrument was the first attempt to evaluate happiness without including any a priori definition of the construct. In other words, the SHS evaluates happiness without considering what happiness is (Lyubomirsky, Sheldon, & Schkade, 2005). Once happiness might present different conceptions and causes across people, the advantage of this approach is to allow the respondents to define their levels of happiness, and the only relevant aspect to report is how happy respondents think they are.

Since its publication, the SHS has been widely accepted, because of its adequate psychometric properties, factorial stability and briefness. The SHS has been translated into several languages, such as Arabic (Moghnie & Kazarian, 2011), European Portuguese (Spagnoli, Caetano, & Silva, 2010), German and Tagalog (Swami et al., 2009), Japanese (Shimai, Otake, Utsuki, Ikemi, & Lyubomirsky, 2004), Malay (Swami, 2008), etc. The adapted version of the scale to Brazil might allow local clinicians, social psychologists and law makers to assess happiness in a very straightforward way. In addition, once happiness is considered one of the most important things in life, researchers might benefit of the scale because they will be able to study the construct more in depth as well as to find out possible differences of happiness across the country. The objective of this study is to present the adaptation process and the psychometric properties of a Brazilian-Portuguese version of the Subjective Happiness Scale.

METHOD

Participants

Participants were 600 subjects (50% men), aged from 18 to 70 years old ($M = 30.1$; $SD = 10.6$), from 22 Brazilian states. A total of 63.7% was single, 25.5% married, 5.3% divorced, 5.1% in cohabitation and .4% widow. This sample is composed by participants who took part of a larger study entitled “Meaning in life and subjective well-being: Relations with optimism, hope, self-efficacy and self-esteem in different stages of the life span”, which aims to evaluate personal and contextual factors related to the positive psychological functioning.

Instruments

Subjective Happiness Scale (SHS): The SHS is a 4-item test that evaluates happiness from the respondent's own perspective. The instrument has presented excellent psychometric properties in several countries (Moghnie & Kazarian, 2011; Spagnoli, Caetano, & Silva, 2010; Shimai, Otake, Utsuki, Ikemi, & Lyubomirsky, 2004; Swami et al., 2009; Swami, 2008). In the validation study (Lyubomirsky & Lepper, 1999), the authors found adequate reliability index, with alpha coefficients varying from .80 to .94 in 14 different samples ($N = 2.732$)

The adaptation process of the original SHS to the Brazilian-Portuguese included several steps, based on the International Test Commission guidelines (ITC, 2010) and on Borsa, Damásio and Bandeira (*in press*). Initially, the questionnaire was translated from English to Portuguese by two independent groups of translators who were instructed to emphasize the meaning and not literal expressions on the translations. With these two versions, the authors conducted a synthesis of the instrument. This synthesis was evaluated by a target-group ($N = 4$) and by a group of three researchers, psychologists and experts in psychometric evaluation. In this process, some difficulties emerged and were reviewed. For example, the original SHS presents anchors only to the first and the last points of the rating scale and they are not the same to the four items. Because this kind of rating-scale is not common in most Brazilian psychological questionnaires, and the target-group found it difficult to comprehend, a third anchor was added in the mid-point for each of the four items (see Annex). Furthermore, it was added a sentence explaining that the respondents can select any number between 1 and 7. This adapted version was back-translated from Portuguese to English by a third independent translator, and this version was evaluated by one American researcher, expert on the topic of subjective happiness and specifically, on the SHS. After the approval, the instrument was considered ready to use.

Rosenberg Self-Esteem Scale (RSS): The Brazilian version of the RSS was adapted and validated by Hutz and Zanon (2011). It is a one-dimensional measure, composed by ten items which evaluate general self-esteem (e.g., "I feel that I have a number of good qualities). In the validation study, the scale presented adequate psychometric properties, with reliability index (α) of .90.

Satisfaction with Life Scale (SWLS): The Brazilian version of the SWLS was adapted and validated by Gouveia, Milfont, Fonseca, and Coelho (2009). The instrument is composed by five items which evaluate life-satisfaction from a subjective perspective (e.g., "In general, I am satisfied with my life). In the validation study, the scale presented adequate psychometric

properties (Reliability index, $\alpha = .80$; goodness-of-fit indexes (GFI = .99; NNFI = .98; CFI = .99; RMSEA = .06; SRMR = .021).

Adult Hope Scale (AHS): The Brazilian version of the dispositional hope scale was adapted and validated by Pacico, Bastianello, Zanon, & Hutz (in press.). It is composed by 12 items (4 are distractors, and are not considered in the analysis), which evaluate hope in a single-factor structure. Four items are related to the sense of determination through personal objectives (e.g., “I energetically pursue my goals”) and four items are related to cognitive evaluation people do about the way they will achieve their objectives (e.g., “I can think of many ways to get the things in life that are most important to me”). In the Brazilian validation study a single-factor solution was achieved with adequate reliability index ($\alpha = .82$).

Data Collection

Participants were assessed through different sources: Personal and media invitations, and snowball technique (Patton, 1990). Those who decided to participate answered a web-based survey. Free-consent term was added in the first page of the survey so that participants could only advance in the questionnaire by accepting the terms and giving their consent in participating on the study.

Data analysis

The total sample was randomly split to evaluate the factor structure of the Brazilian version of the SHS. An exploratory factor analysis (EFA) was conducted with the first half ($n_1 = 300$), using Principal Axis Factoring extraction method. The sample adequacy was assessed by the Kaiser-Meyer-Olkin (KMO) and Bartlett’s sphericity test measures. Reliability was assessed using the Alpha coefficient.

A confirmatory factor analysis (CFA) was then performed with the second group ($n_2 = 300$) to cross-validate the obtained exploratory factor structure. The robust maximum likelihood extraction method (i.e., with corrections to data non-normality, Satorra & Bentler, 2001) was used in the CFA (this analysis was conducted using EQS 6.1). The fit indices used were: the chi-square to degrees-of-freedom ratio ($s-b\chi^2/df$), the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), the comparative fit index (CFI), and the Tucker-Lewis index (TLI).

According to guidelines, model fit presents acceptable amount of errors if the following values are achieved: $s-b\chi^2/df$ ratio less than 3, SRMR less than .08, RMSEA less

than .08 (considering the 90% confidence interval), and CFI and TLI values greater than .90 (preferably greater than .95, Brown, 2006; Schreiber, Stage, Nora, & Barlow, 2006).

Evidences of convergent validity was assessed through correlations of the subjective happiness (SHS) with life satisfaction (SWLS), general self-esteem (GSE) and dispositional hope (DHS) in the total sample ($N = 600$). Positive and moderate correlations among these variables were expected.

RESULTS

Exploratory Factor Analysis

EFA (KMO = .79; Bartlett's test of sphericity $\chi^2 [6] 381.427, p < .001$) presented a single-factor solution, which accounted for 64.21% of the explained variance of the construct. All items loaded in the factor, with adequate factor loadings (i.e., $> .30$, see Table I). The Alpha coefficient was .84.

Table 1

Exploratory Factor Analysis of the Brazilian Version of the Subjective Happiness Scale

	Factor
	Subjective Happiness
Item 1	.82
Item 2	.74
Item 3	.65
Item 4	-.69
Eigenvalue	2.56
Explained Variance	64.21%
Alpha Coefficient	.84
Mean (<i>SD</i>)	20.04 (5.13)

Confirmatory Factor Analysis

CFA was conducted with the second half of the sample using absolute, parsimony, and comparative fit indexes, as recommended by Brown (2006). Excellent fit indexes were achieved: $s-b\chi^2 = .329, df = 2, p = .84$; CFI = 1.00; TLI = 1.02; SRMR = .006; RMSEA (90% CI) = .000 (.000 - .006).

Convergent Validity

Pearson's correlations among subjective happiness, satisfaction with life, self-esteem and hope were performed in the total sample ($N = 600$) (see Table 2). As expected, subjective happiness correlated significantly with life satisfaction, hope and self-esteem. The magnitudes of the correlations were all positive and moderate (ranging from .48 to .66), as previously reported (Lyubomirsky & Lepper, 1999).

Table 2

Means, Medians, Standard Deviations, Reliabilities and Correlation Matrix of Measured Variables

	1	2	3	4
1. Subjective happiness	(.81)			
2. Life satisfaction	.66	(.85)		
3. Self-esteem	.57	.61	(.87)	
4. Hope	.48	.54	.62	(.81)
<i>M</i> (possible range)	20.1 (4-28)	24.9 (5-35)	32.5 (10-50)	31.37 (8-40)
<i>Mdn</i>	21.0	26.0	33.0	31.0
<i>SD</i>	5.07	5.82	4.87	3.93

Note. 1 – Subjective happiness (SHS); 2 – Life satisfaction (SWLS); 3 – Self-esteem (RSS); 4 – Hope (DHS). Values in parenthesis along the main diagonal represent internal consistency estimates (Alpha coefficient). *M* - Mean; *Mdn* - Median; *SD* - Standard deviation. All correlations were significant at $p < .001$

DISCUSSION AND FINAL CONSIDERATIONS

The Brazilian version of the SHS presented excellent psychometric properties. All items loaded in the expected factor, and the CFA results provided excellent fit. Convergent validity also presented results in the expected directions and offered support to the external validity of the measure. The positive correlations of subjective happiness with self-esteem and hope suggest that happier people also tend to present higher levels of self-esteem and are more hopeful. From the correlation between subjective happiness and satisfaction with life ($r = .66$), it is possible to see that both variables evaluate similar but different constructs. Both

are related to a positive self-perception, however, while the first assesses the level of global happiness, the second measures the level of global life contentment.

These results are in coherence with the original and all other adapted versions of the SHS (Moghnie & Kazarian, 2011; Shimai, Otake, Utsuki, Ikemi, & Lyubomirsky, 2004; Spagnoli, Caetano, & Silva, 2010; Swami, 2008; Swami et al., 2009), and suggest that the SHS is a valid and reliable measure to evaluate subjective happiness in Brazil. Future researches are suggested in order to test the validity of the SHS in different Brazilian samples, such as with clinic patients and across cultures. The main limitation of this study is to not be based on a representative Brazilian sample.

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CAPÍTULO VI

ARTIGO V

**COMPLEX EXPERIENCES OF MEANING IN LIFE: INDIVIDUAL DIFFERENCES
AMONG SOCIODEMOGRAPHIC VARIABLES, SOURCES OF MEANING AND
PSYCHOLOGICAL FUNCTIONING**

**EXPERIÊNCIAS COMPLEXAS DE SENTIDO DE VIDA: DIFERENÇAS ENTRE
VARIÁVEIS BIOSOCIODEMOGRÁFICAS, FONTES DE SENTIDO E
FUNCIONAMENTO PSICOLÓGICO**

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ABSTRACT

In this study, we sought to evaluate how subjects inserted in different categories of meaning (meaningfulness, crisis of meaning, existential indifference, and existential conflict) differ in terms of bio-sociodemographic and psychological variables. Participants were 3,034 subjects, from 22 Brazilian states. From the total sample, 80.7% of subjects were classified as belonging to the meaningfulness group, 9.6% as being existentially indifferent, 5.7% as having a crisis of meaning, and 4.0% as experiencing existential conflict. Men were more frequently classified into the existentially indifferent and crisis of meaning groups. The meaningfulness group presented higher scores in all sources of meaning when compared to other groups, whereas the existentially indifferent group presented the lowest scores. A different pattern of relationships between the sources of meaning and the levels of meaningfulness for the different categories of meaning was also found. The meaningfulness group presented 18 sources of meaning as predictor of the levels of meaningfulness. On the other hand, for the conflict group only one source (spirituality) presented significant associations. Significant differences between the existential indifference and the existential conflict groups were found for subjective happiness and life satisfaction but not found for optimism, pessimism, hope (agency and pathways), self-esteem and self-efficacy.

Key-words: meaning in life, SoMe, categories of meaning, existential indifference, existential conflict, well-being.

INTRODUCTION

Meaning in life (MIL) can be defined as the extent to which people comprehend and see significance in their lives as well as the degree to which they perceive themselves to have a purpose or overarching aim in life (Steger, 2009). It is assumed that MIL is primarily cognitive in nature, including beliefs related to one's purpose in life and moral beliefs (Heine, Proulx, & Vohs, 2006; McMahan & Renken, 2011), and has the power to positively influence the way people conduct their daily lives (McKnight & Kashdan, 2009).

Throughout decades of research, MIL has been proved to be an important resource for positive physical and psychological human functioning. Several studies have presented positive associations between MIL, psychological and subjective well-being, and quality of life (Fillion et al., 2009; Ho, Cheung, & Cheung, 2010; Melton & Schulenberg, 2008; Rathi & Rastogi, 2007; Steger & Frazier, 2005). Similarly, a lack of MIL has been related to higher levels of neuroticism (Zika & Chamberlain, 1992), perceived stress (Bauer-Wu & Farran, 2005), negative affect (Debats, van der Lubbe, & Wezeman, 1993), depression (Mascaro & Rosen, 2005), suicidal ideation (Edwards & Holden, 2001), and other adverse factors.

The functioning of MIL in individuals' physical and mental health is complex. Some hypotheses suggest that the perception of MIL, as a cognitive process, is a central feature in the self-regulation and self-perception of behaviors by assisting the individual in the use of adaptive behavior and then offering a sense of existential meaning. However, MIL itself does not regulate behavior; instead, it assist individuals so that they can more easily overcome psychosocial stressors through decisions that are congruent with an organized system of personal values (McKnight & Kashdan, 2009).

Despite its having largely been shown that higher levels of MIL are implicated in better physical and mental health, until recently, the empirical psychological literature has almost neglected the following question: What are the real implications of high and low levels of MIL in terms of existential issues? Theoretical tradition, especially as espoused in the landmark studies provided by Frankl (1968; 1973), has posited that a lack of MIL directly resonates in existential crisis (in this study, termed "crisis of meaning"). This assumption, however, implies that the crisis of meaning and meaningfulness are two poles of a unique *continuum* (Schnell, 2010). Pursuant to this rationale, the first psychometric instruments developed to assess MIL (e.g., the Purpose in Life Test [PIL], Crumbaugh & Maholick, 1964; the Sense of Coherence Scale [SOC], Antonovsky, 1993; and the Life Regard Index [LRI], Battista & Almond, 1973) were created based upon a one-dimensional perspective in which

individuals' low scores on these scales would reflect boredom, despair, and existential crisis (i.e., supposed negative outcomes derived from a lack of MIL), whereas high scores would reflect meaningfulness (Schnell, 2010).

With respect to these points, Schnell (2010) and Schnell and Becker (2006; 2007) suggested that meaningfulness and crisis of meaning are not the two poles of a single dimension and, thus should be measured separately by two distinct constructs (Schnell, 2010; 2011). Consequently, Schnell and Becker (2006; 2007) developed the Sources of Meaning and Meaning in Life Questionnaire (SoMe; Schnell & Becker, 2006; 2007; Schnell, 2009), which separately assesses meaningfulness and crisis of meaning, as well as 26 sources of meaning (Table 1 presents the factor structure of the SoMe in a Brazilian sample).

Meaningfulness is defined as a sense of meaning based on an appraisal of one's life as coherent, significant, directed, and belonging (Schnell, 2010). The crisis of meaning, in turn, refers to the perception of suffering from a lack of meaning. Both scales can vary from low to high in their respective measures (i.e., low and high meaningfulness; and low and high crisis of meaning; Schnell, 2009; 2010; 2011). Beyond the theoretical advances of this new proposition, it allows researchers to evaluate not only the degree of meaningfulness or crisis of meaning but also the existence of four different categories of meaning (See Figure 1):

- 1) Meaningfulness: High meaningfulness and low crisis of meaning;
- 2) Crisis of meaning: Low meaningfulness and high crisis of meaning;
- 3) Existential indifference: Low meaningfulness and low crisis of meaning;
- 4) Existential conflict: High meaningfulness and high crisis of meaning.

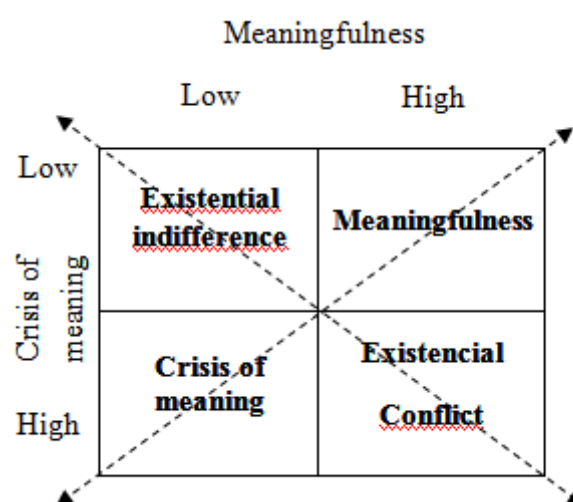


Figure 1. Different Categories of Meaning

Aiming to assess the consistency of these propositions, Schnell (2010) evaluated in a representative German sample ($N = 603$) how and if the subjects could be classified into the four aforementioned categories of meaning. From the total sample, 61% were classified as experiencing meaningfulness, 35% as being existentially indifferent, and 4% as having a crisis of meaning. No subject was classified as belonging to the existential conflict type; thus, only three categories of meaning were evaluated in the subsequent analysis.

No significant gender ($\chi^2 = 2.91$; $df = 2$; $p = 0.23$) or educational level (Kruskal-Wallis $\chi^2 = 2.75$; $df = 2$; $p = 0.25$) differences were found among the three categories. The existentially indifferent subjects were younger than those in the meaningfulness group. With respect to the sources of meaning, the existentially indifferent presented lower scores for all sources of meaning when compared to the individuals in the meaningfulness group and for some sources (viz., self-knowledge, spirituality, religiosity and generativity) when compared to members of the crisis of meaning group (Schnell, 2010). These results led the author to two main conclusions: 1) A sense of meaningfulness arises from the commitment made to the sources of meaning that one finds important for himself or herself, and this achievement requires a certain degree of effort and motivation (Schnell, 2010), just as motivational theories of goals and purpose suggest (Emmons, 2003; McKnight & Kashdan, 2009); and 2) the existentially indifferent seem to live a superficial and uncommitted “everydayness” life (Schnell, 2010).

In a second study ($N = 135$), Schnell (2010) evaluated the differences among the three categories of meaning in relation to mental health (measured by depression and anxiety symptoms) and life satisfaction. In summary, it was found that the existentially indifferent presented higher levels of life satisfaction and lower levels of anxiety and depression when compared to those individuals experiencing crises of meaning. However, when compared to members of the meaningfulness group, significant differences were found only in life satisfaction but not in depression and anxiety. Thus, although the subjects classified as existentially indifferent presented as having less committed lives with respect to sources of meaning, they had not declined in their levels of mental health regardless of their being less satisfied with their lives (Schnell, 2010).

In Schnell’s (2010) article, several questions remained unanswered, such as: To what extent will the high percentage of existentially indifferent individuals found in the German sample be replicated in other countries? What is the reason for the lack of commitment exhibited by such a high percentage of the population? Is the existential conflict category

truly unpopulated? Are individuals characterized by the different categories of meaning because of a developmental stage or is it a more trait-like pattern of attitude toward life?

Considering that Schnell (2010) presented new features with regard to MIL theory, her study requires both replication and advances.

CURRENT STUDY

This study aims to evaluate and to extend Schnell's (2010) findings and thereby offers the following objectives:

- 1) To evaluate in a large Brazilian community sample the existence of the four categories of meaning theoretically proposed by Schnell (2010; see figure 1);
- 2) To evaluate to what extent the different categories of meaning differ in terms of sociodemographic variables and commitment to the sources of meaning;
- 3) To evaluate which sources of meaning predict the levels of meaningfulness for the different categories of meaning; and
- 4) To evaluate possible similarities and differences in the psychological functioning of the different categories of meaning, employing a set of psychological variables not previously investigated, such as dispositional aspects of personality.

METHOD

Participants

Participants were 3,034 subjects (63.9% women) ranging in age from 18 to 91 ($M = 33.90$; $SD = 15.01$) years old from 22 Brazilian states. From the total, 59.9% were single, 27.3% were married, 6.1% were divorced, 5.2% were in stable relationships (e.g., dating, engaged, or living with a partner), and 1.5% were widowed. Participants were invited to collaborate with the study through different modalities. A total of 91.4% answered the questionnaires through a web-based platform, whereas the remaining 8.6% responded to the questionnaires in a paper-and-pencil form. Invitations were sent through different sources, such as personal and media invitations, recruitment within social and occupational institutions (especially the adults and the elderly), and the snowball technique (Patton, 1990).

Instruments

Sociodemographic questionnaire: This instrument was developed to evaluate the sociodemographic characteristics of the sample (e.g., gender, age, marital status, educational level, financial income, job satisfaction, religiosity/spirituality, presence or absence of chronic illness or special needs, etc.).

Sources of Meaning and the Meaning in Life Questionnaire (SoMe, Schnell & Becker, 2007; Brazilian version adapted by Damásio, Schnell, & Koller, 2013): This instrument is a 151-item questionnaire (ranging from 0 – totally disagree to 5 – totally agree) that assesses 26 different sources of meaning, encompassing five larger dimensions of meaning (“vertical self-transcendence”, “horizontal self-transcendence”, “self-actualization”, “order”, and “well-being and relatedness”). The SoMe also evaluates levels of meaningfulness (e.g., “I lead a fulfilled life”) and crisis of meaning (e.g., “I feel pain from finding no purpose in my life”) through two different scales. Table 1 presents the structure of the sources of meaning of the SoMe in the present sample. Its scores range from 1 to 5. The expected bi-factorial solution of the meaningfulness and crisis of meaning factors presented excellent fit indexes: TLI = .98; CFI = .98; RMSEA = .075 (.070 - .081). The meaningfulness and crisis of meaning factors were negatively correlated ($r = -.61$; $p < .001$).

Adult Hope Scale (AHS, Snyder et al., 1991; Brazilian version adapted by Pacico, Bastianello, Zanon, & Hutz, *in press*): The AHS is a 12-item Likert-type scale (ranging from 1 – totally false to 5 – totally true) with four items assessing agency, four items assessing pathways, and four distractor items that are not considered for analysis. Agency hope refers to the sense of successful determination to meet goals. Pathways hope refers to the capacity to generate successful plans to meet goals. The scores for both agency and pathways range from 4 to 20. In the current study, the goodness-of-fit indexes for the expected bi-factorial solution were as follows: CFI = .98; TLI = .97; RMSEA (90% CI) = .071 (.064 - .077); SRMR = .052.

Life Orientation Test-Revised (LOT-R, Scheier, Carver, & Bridges, 1994; Brazilian version adapted by Bastianello, Zanon, Pacico, Reppold, & Hutz, 2012): The LOT-R evaluates one’s levels of optimism (e.g., “In uncertain times, I usually expect the best”) and pessimism (e.g., “I rarely count on good things happening to me”). It is composed of ten items (4 fillers), answered on a five-point Likert scale (1 = totally disagree; 5 = totally agree). For both the pessimism and optimism scales, scores range from 4 to 20. In this study, the expected bi-factorial solution presented excellent goodness-of-fit indexes: CFI = .98; TLI = .97; RMSEA (90% CI) = .068 (.057 - .078); SRMR = .036.

Rosenberg's Self-esteem Scale (RSS; Rosenberg, 1989; Brazilian version adapted by Hutz & Zanon, 2011): The RSS is a 10-item Likert-type scale (1 – totally disagree; 4 – totally agree) that assesses general self-esteem using a single-factor solution. Scores range from 10 to 40. Higher scores represent higher levels of general self-esteem. In the current study, the fit indexes were as follows: CFI = .97; TLI = .96; RMSEA (90% CI) = .092 (.086 - .097), SRMR = .079.

General Self-efficacy Scale (GSS, Schwarzer & Jerusalém, 1995; Brazilian version adapted by Teixeira & Dias, 2005): The GSS is a 10-item Likert-type scale (ranging from 1 – not at all true to 7 – exactly true) that assesses general self-efficacy using a single-factor solution. Its scores range from 10 to 70. Higher scores represent higher levels of general self-efficacy. In the current study, the fit indexes were as follows: CFI = .96; TLI = .97; RMSEA (90% CI) = .089 (.084 - .094); SRMR = .062.

Subjective Happiness Scale (SHS, Lyubomirsky & Lepper, 1999; Brazilian version adapted by Damásio, Zanon, & Koller, *in press*): The SHS is a 4-item Likert-type scale (ranging from 1 to 7 points, with varying anchors) that assesses subjective happiness using a single-factor solution. Its scores range from 4 to 28. Higher scores represent higher levels of subjective happiness. In this study, the SHS presented excellent goodness-of-fit indexes: CFI = 1.00; TLI = .99; RMSEA (90% CI) = .037 (.017 - .061); SRMR = .042.

Satisfaction with Life Scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985; Brazilian version adapted by Gouveia, Milfont, Fonseca, & Coelho, 2009): The SWLS is a 5-item Likert-type scale (ranging from 1 – totally disagree to 5 – totally agree) that assesses satisfaction with life using a single-factor solution. Its scores range from 5 to 25. Higher scores represent higher levels of subjective happiness. In this study, the SWLS presented excellent goodness-of-fit indexes: CFI = 1.00; TLI = .99; RMSEA (90% CI) = .034 (.021 - .049); SRMR = .011.

Table 1.

Scales, Dimensions, Sources of Meaning, Factor Loadings, Number of items per scale, and Reliability Indexes of the SoMe-BR

Dimensions	Sources of meaning	Factor loadings	Items (n)	Alpha reliability
Self-transcendence		-	8	.82
<i>Vertical</i>	Spirituality	.87	5	.70
	Explicit religiosity	.78	3	.95
Self-transcendence		-	50	.85
<i>Horizontal</i>	Self-knowledge	.63	6	.75
	Social commitment	.62	5	.62
	Development	.60	6	.76
	Knowledge	.59	5	.66
	Generativity	.56	6	.75
	Unison with Nature	.52	5	.82
	Harmony	.52	8	.88
	Creativity	.46	5	.85
	Health	.44	4	.68
Self-actualization		-	26	.78
	Individualism	.80	6	.61
	Achievement	.62	4	.72
	Challenge	.59	5	.67
	Freedom	.53	6	.89
	Power	.51	5	.61
Order		-	24	.77
	Moral	.66	5	.72
	Reason	.66	5	.66
	Practicality	.62	8	.71
	Tradition	.60	6	.69
Well-being and relatedness		-	33	.81
	Fun	.75	6	.71
	Community	.74	5	.77
	Love	.62	4	.69
	Comfort	.52	6	.60
	Care	.51	4	.75
	Attentiveness	.40	8	.71

Data analysis

Initially, we sought to examine the frequency of the four different categories of meaning in the total sample. To that end, participants were classified as low or high for both the crisis of meaning and the meaningfulness scales, with respect to the means of the rating scales ($\leq 2.9 / \geq 3$, range 0-5; Schnell, 2010).

A multivariate analysis of variance (MANOVA) was conducted to evaluate the types of meaning with respect to sociodemographic characteristics (e.g., age, educational level, and monthly income). For the categorical variables (viz., gender, marital status, religious or spiritual beliefs—presence versus absence—and job satisfaction—yes versus no), a chi-square (χ^2) test was conducted. Once the four categories of meaning had been classified, a *z*-test employing Bonferroni *p*-adjusted corrections for multiple comparisons was used (Abdi, 2007). Adjusted residuals were requested to determine in which cells significant differences could be found. Adjusted residuals greater than 1.96 indicated significant differences among the cells (Tabachnick & Fidell, 2012).

Second, we aimed to evaluate the relationship among the different categories of meaning with the sources of meaning. Thus, a multivariate analysis of covariance (MANCOVA) was conducted using the 26 sources of meaning as dependent variables (DVs) and the categories of meaning as independent factors. The covariates included all significant sociodemographic variables to control for possible intervening effects.

Furthermore, a set of multiple linear regression analyses (using the entry method) evaluated to what extent the 26 sources of meaning predicted levels of meaningfulness for the different categories of meaning. To test for possible differences in the predictive values (R^2) of the regression models for each category, Fisher's *Z*-test (Cohen & Cohen, 1983) was employed.

Subsequently, we sought to identify differences in the levels of optimism, hope, self-esteem and self-efficacy with respect to the different categories of meaning. Another MANCOVA was employed using categories of meaning as DV and optimism, pessimism, hope (agency and pathway), self-esteem, and self-efficacy as independent variables (IVs).

For all analyses of variance, bootstrapping procedures (1,000 re-samplings, with a 99% confidence interval for the mean difference, ΔM) were employed to establish greater reliability for the results, to correct for the non-normal distribution of the sample and the difference in group sizes, and to present a 99% confidence interval for the mean differences (Haukoos & Lewis, 2005). The effect sizes were calculated using eta-squared (η^2).

RESULTS

Categories of meaning and sociodemographic data

From the total sample, 80.7% of subjects were classified as belonging to the meaningfulness group ($n = 2.450$), 9.6% as being existentially indifferent ($n = 292$), 5.7% as having a crisis of meaning ($n = 172$), and 4.0% as experiencing existential conflict ($n = 120$). Small but significant effects were found for age [$F(3, 3033) = 15.186, p < .001, \eta^2 = .02$], educational level [$F(3, 3033) = 22.745, p < .001, \eta^2 = .01$], and financial income [$F(3, 3033) = 6.450, p < .001, \eta^2 = .02$]. The members of the meaningfulness group were older when compared to those classified as existentially indifferent [mean difference (ΔM) = 3.93 years] or to those classified as experiencing a crisis of meaning ($\Delta M = 6.42$ years). The meaningfulness group also reported a higher educational level when compared to all other groups ($p < .001$) and higher income when compared to the existential conflict group ($p < .001$).

The chi-square results were significant for all variables [gender: $\chi^2(3) = 17.797; p < .0001$; marital status: $\chi^2(12) = 85.388; p < .0001$; religious/spiritual beliefs: $\chi^2(12) = 237.015; p < .0001$; and job satisfaction: $\chi^2(3) = 91.357; p < .0001$]. An analysis of the standardized residuals showed that men manifested a higher probability of being characterized as having existential indifference or crises of meaning. Women, in turn, manifested a higher probability of being characterized as experiencing meaningfulness. No significant differences were found between the existential conflict group and any other group. Single participants were more frequently characterized as having existential indifference, crises of meaning or existential conflict when compared to married participants. Married participants, in turn, were more frequently characterized as having experienced meaningfulness when compared to single participants and those in stable relationships. Divorced and widowed participants presented no significant differences compared to other marital statuses for any category of meaning.

Those who did not espouse religious or spiritual beliefs were more prone to be characterized as being existentially indifferent or having crises of meaning. The religious or spiritual believers, in turn, manifested higher probabilities of being characterized as belonging to the meaningfulness group. Non-significant associations were found for the existential conflict group. Finally, those who were satisfied with their jobs presented a higher probability of being categorized in the meaningfulness group.

Categories of meaning and sources of meaning

In this section, we aimed to analyze to what extent the levels of the sources of meaning were similar or dissimilar among the different categories of meaning. The MANCOVA [Wilk's Lambda = .652; $F(78, 8879) = 17.154$, $p < .001$; $\eta^2 = .13$], adjusted for age, gender and marital status, showed that the existentially indifferent group manifested lower levels on all sources of meaning when compared to the meaningfulness and existential conflict groups ($p < .0001$). When compared to the crisis of meaning group, the existentially indifferent group manifested lower levels of spirituality and self-knowledge and higher levels of community, development, fun, health, power. The effect sizes (η^2) ranged from .01 (knowledge and freedom) to .18 (generativity).

Considering these results, we aimed to evaluate how the different sources of meaning predicted the levels of meaningfulness for the four different categories of meaning. Thus, four multiple linear regressions (one for each category of meaning) were employed. The results varied significantly across groups (See Table 2). The meaningfulness group presented 18 sources of meaning as significant predictors of meaningfulness. The crisis of meaning group presented six and the existentially indifferent group presented five; for the existential conflict group, only spirituality predicted the levels of meaningfulness.

The magnitudes of the adjusted r^2 values for the final models (including only the significant sources) were significantly different across groups: the existentially indifferent model explained less variance when compared to all other categories (viz., the existentially indifferent model versus the meaningfulness model, $Z = 4.48$, $p < .01$; the existentially indifferent model versus the crisis of meaning model, $Z = 2.63$, $p < .01$; and the existentially indifferent model versus the existential conflict model, $Z = 2.59$, $p < .01$).

Table 2.

Multiple Linear Regressions among Sources of Meaning and Categories of Meaning

Sources of meaning	Categories of meaning							
	Meaningful		Crisis of Meaning		Existentially Indifferent		Conflicting	
	β	<i>t</i> -value	β	<i>t</i> -value	β	<i>t</i> -value	β	<i>t</i> -value
Vertical self-transcendence	-	-	-	-	-	-	-	-
Explicit Religiosity	.10	4.64***	.04	.43	-.12	-1.46***	-.03	-.23
Spirituality	.10	4.65***	.24	2.28*	.30	3.72***	.32	2.59*
Horizontal self-transcendence	-	-	-	-	-	-	-	-
Self-knowledge	.05	2.20*	-.15	-1.62	-.05	-.74	.23	1.88
Social commitment	-.01	-.44	.21	2.40*	.02	.27	.10	.99
Development	.14	6.14**	.10	.93	.12	1.42	.10	.73
Knowledge	-.00	-.23	-.08	-.82	-.04	-.54	-.18	-1.35
Generativity	.21	9.61***	.25	2.70**	.21	2.82**	.14	1.18
Unison with Nature	.00	-.01	.05	.64	.03	.46	-.00	-.04
Harmony	.13	5.53***	.02	.24	.16	1.95*	-.09	-.71
Creativity	.02	1.16	.15	1.69	-.09	-1.31	.07	.69
Health	.06	3.62***	.19	2.47*	-.04	-.72	.10	1.10
Self-actualization	-	-	-	-	-	-	-	-
Individualism	.01	.47	-.02	-.17	-.02	-.22	.06	.46
Achievement	.07	3.17***	-.08	-.94	-.01	-.18	-.21	-1.70
Challenge	.05	2.72**	.14	1.64	.00	.044	-.14	-1.18
Freedom	.04	2.07*	.01	.09	-.13	-1.85	.01	.14
Power	.15	7.50***	.24	2.54*	.06	.83	.21	1.84
Well-being and relatedness	-	-	-	-	-	-	-	-
Fun	.01	.28	.13	1.41	.02	.32	.13	1.17
Community	.07	3.50***	.11	.98	.02	.34	-.02	-.15
Love	.06	2.98**	.01	.10	-.04	-.55	.15	1.39
Comfort	.04	2.25*	.06	.78	-.02	-.28	.01	.05
Care	-.00	-.06	-.10	-.94	.00	.07	.08	.67
Attentiveness	.08	3.59***	-.08	-.86	.08	1.17	.04	.34
Order	-	-	-	-	-	-	-	-
Moral	.09	4.51***	.08	.76	-.04	-.58	-.01	-.09
Reason	.01	.74	.10	1.16	.22	3.20***	.17	1.60
Practicality	.07	-3.62***	-.18	-1.98*	-.04	-.52	-.12	-.10
Tradition	.05	-2.24*	.09	.92	-.01	-.08	.04	.27
Initial model (R^2)	.46		.35		.18		.33	
Final model (R^2)^a	.46		.32		.17		.20	

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; ^a Final model refers to a secondary analysis including only the significant predictors. In bold, significant predictors for each category.

Categories of Meaning and Psychological Functioning

To evaluate possible differences in psychological functioning (optimism, pessimism, agency hope, pathways hope, self-efficacy and self-esteem) among the different categories of meaning, another MANCOVA (using age, gender and marital status as covariates) was employed. The omnibus MANCOVA [Wilk's Lambda = .65; $F(24, 8533) = 56.007$; $p < .0001$; $\eta^2 = .13$] presented significant differences when considering all dependent variables jointly. The effect sizes for each dependent variable were predominantly high: pessimism, $\eta^2 = .13$; optimism, $\eta^2 = .14$; agency hope, $\eta^2 = .17$; pathways hope, $\eta^2 = .08$; life satisfaction, $\eta^2 = .23$; subjective happiness, $\eta^2 = .25$; self-efficacy, $\eta^2 = .08$; and self-esteem, $\eta^2 = .24$.

With respect to pessimism (Figure 2a), individuals experiencing meaningfulness presented lower levels when compared to all other categories ($p < .001$). No differences were found between the crisis in meaning and the existential conflict groups ($p = 1.00$). With respect to optimism (Figure 2b), the meaningfulness group presented higher levels than all other categories ($p < .001$); the existential conflict group presented higher levels than the crisis in meaning group ($p < .001$), and no differences were found between the existential conflict and existential indifference groups.

For hope (agency, Figure 2c; pathways, Figure 2d), the meaningfulness group manifested higher levels, whereas the crisis of meaning group manifested lower levels, when compared to all other categories ($p < .001$). No significant differences were found with respect to the existential conflict and existential indifference groups ($p = 1.000$).

With respect to the indicators of subjective well-being (life satisfaction, Figure 2e; subjective happiness, Figure 2f), significant differences were found among all groups. The members of the meaningfulness group were more satisfied with life and happier than the members of any other category ($p < .001$). Conversely, the crisis of meaning group presented lower levels than all other categories ($p < .001$) for both variables. When comparing the

existential indifference group to the existential conflict group, it was found that the former was more satisfied with life and also happier ($p < .001$).

Last, for self-efficacy (Figure 2g) and self-esteem (Figure 2h), the meaningfulness group presented higher levels when compared to all other categories ($p < .001$). The crisis of meaning group, in turn, presented lower levels when compared to all other groups on self-efficacy ($p < .001$); however, for self-esteem, their levels were equivalent to those found in the existential conflict group ($p = 1.00$). The existential indifference group presented equivalent levels of self-efficacy ($p = .105$) and higher levels of self-esteem ($p < .001$) when compared to the existential conflict group. Table 3 presents the descriptive statistics related to these associations.

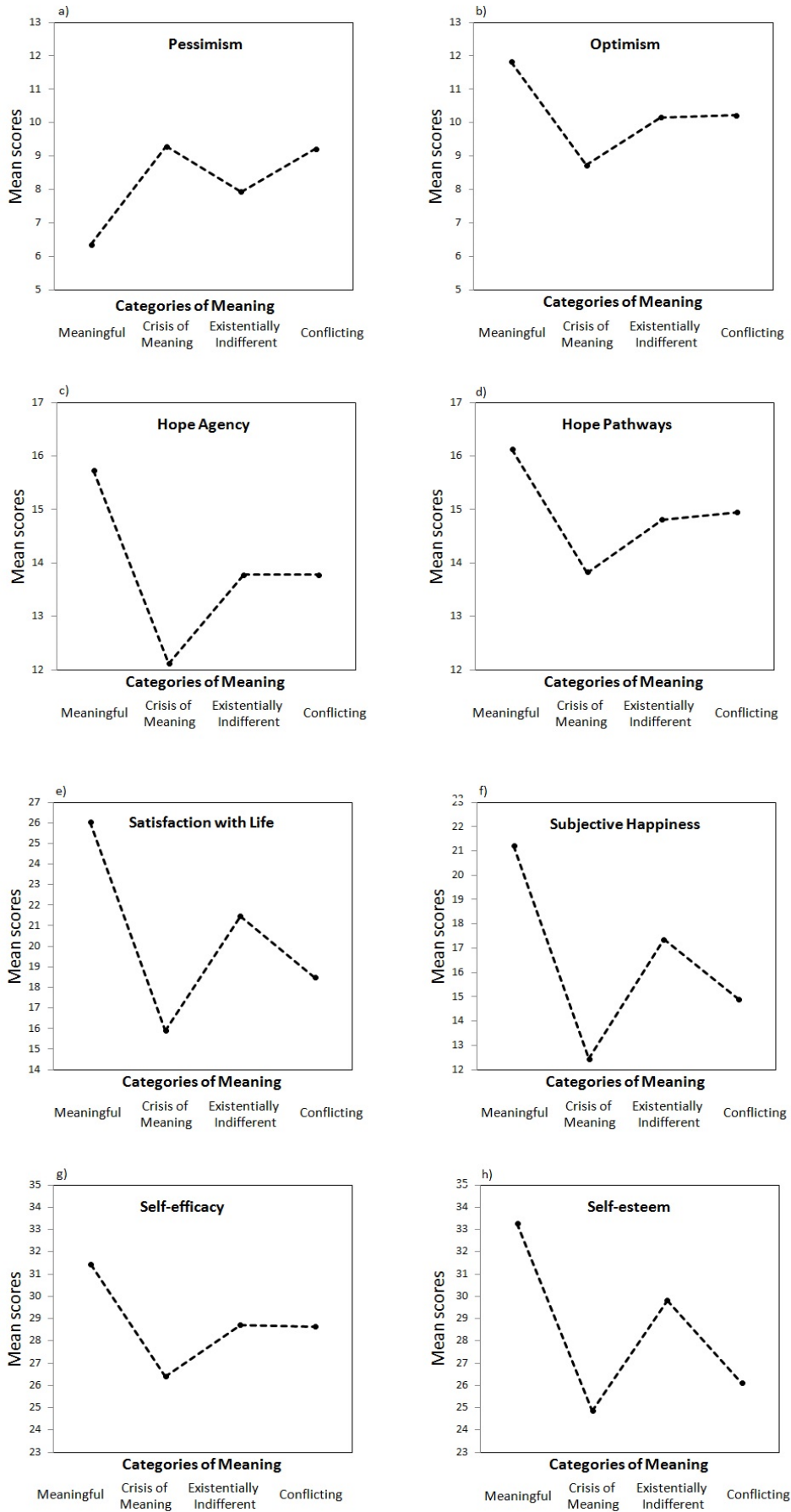


Figure 2. Levels of well-being related variables across the different categories of meaning

Table 3.

Descriptive statistics of the psychological variables for the different categories of meaning

Psychological Variables	Categories of Meaning			
	Meaningful	Crisis of Meaning	Existentially Indifferent	Conflicting
	Mean (99% CI)	Mean (99% CI)	Mean (99% CI)	Mean (99% CI)
Pessimism	6.37 (6.27 – 6.47)	9.23 (8.87 - 9.59)	7.91 (7.64 - 8.19)	9.19 (8.75 - 9.62)
Optimism	11.82 (11.74 - 11.91)	8.78 (8.45 - 9.10)	10.21 (9.96 - 10.45)	10.18 (9.79 - 10.57)
Hope (Agency)	15.75 (15.66 - 15.84)	12.17 (11.83 - 12.51)	13.81 (13.55 - 14.07)	13.74 (13.33 -14.15)
Hope (Pathway)	16.14 (16.05 - 16.23)	13.84 (13.50 - 14.18)	14.82 (14.56 - 15.08)	14.95 (14.54 -15.36)
Life satisfaction	26.05 (25.84 - 26.27)	16.03 (15.22 - 16.83)	21.60 (20.98 - 22.22)	18.32 (17.35 - 19.29)
Subjective happiness	21.24 (21.07 - 21.41)	12.53 (11.88 - 13.17)	17.41 (16.91 - 17.91)	14.78 (14.00 - 15.56)
Self-efficacy	31.46 (31.27 - 31.65)	26.53 (25.82 - 27.24)	28.74 (28.19 - 29.29)	28.68 (27.82 - 29.54)
Self-esteem	33.30 (33.12 - 33.47)	25.04 (24.38 - 25.70)	29.92 (29.41 - 30.43)	26.25 (25.45 - 27.05)

DISCUSSION

This study presents a series of results about the existence of different categories of meaning in a large Brazilian sample and how the members of these categories differ in terms of their commitment to sources of meaning and well-being-related variables. The first notable finding highlights the existence of all possible categories of meaning (viz., meaningfulness, existential indifference, crisis of meaning, and existential conflict) theoretically proposed by Schnell (2010). The majority of the sample (80.1%) presented their lives as having meaningfulness. In contrast to the findings of Schnell (2010), the category representing existential conflict appeared in the Brazilian sample for 4% of the participants. As far as we know, this is the first time that the existential conflict category has emerged in the meaning-in-life (MIL) literature.

According to Schnell (2010), this category is unlikely to exist because it is a priori contradictory in its assumptions. Individuals classified as experiencing existential conflict are those who believe that their lives are meaningful (i.e., they experience high levels of meaningfulness) but also suffer from crises of meaning. So, what do our results suggest? How can one present as experiencing meaningfulness and also a crisis of meaning simultaneously? It is possible that such individuals may find meaningfulness in some areas of their lives, but they are still struggling to find meaning in other areas. In other words, they might be just partially existentially realized and, even without having achieved a complete state of fulfillment, they endorse high levels of meaningfulness. This statement seems plausible based on several perspectives. Frankl (1963; 1978), for example, has largely posited that a human's will to establish meaning should be an unceasing motivation. Because the aspects that make a life

meaningful tend to change over the natural course of the life span, it is a natural process not to achieve total fulfillment.

Another factor that might be related to the existence of the existential conflict category may rely on the fact that some individuals have a sense of gratitude towards life such that, even should circumstances not be totally satisfactory (in this case, that one perceives an existential crisis), they nevertheless judge their lives positively (in this case, as representing meaningful lives; Emmons & Shelton, 2002). If this proposition is correct, this partially justifies the reason that the existential conflict category is associated with higher levels of well-being-related variables when compared to the crisis of meaning category, for example. To better comprehend these different categories, we discuss how they differ from one another in terms of sociodemographic variables, commitment to sources of meaning, and psychological functioning.

Categories of meaning and sociodemographic variables

Considering sociodemographic differences, it was found that men were more frequently classified into the existentially indifferent and crisis of meaning groups, whereas women were more prone to be classified into the meaningfulness group. No gender differences were found for the existential conflict group. This is to say that both men and women were equally likely to be classified into groups representing states of existential conflict. The relationship that exists between meaningfulness and gender is still not totally understood. Some studies have found men to have higher levels of meaning in life when compared to women (Crumbaugh, 1968; Orbach, Iluz, & Rosenhein, 1987). Others have found that women having slightly higher levels when compared to men (Schnell, 2009). Others, in turn, have found no significant differences (King, Hicks, Krull, & Del Gaiso, 2006; Scannell, Allen, & Burton, 2002; Steger et al.,

2006). These contradictory results might be related to cultural factors, sample biases, or measurement problems and errors. In this sample, what differed among men and women were not the levels of meaningfulness ($p = .38$), but the levels of the crisis of meaning, with men having higher levels than women ($p < .001$).

Individuals classified into the meaningfulness category were older when compared to the existential indifference and crisis of meaning groups, but no differences in age were found among the meaningfulness and existential conflict groups. Therefore, it seems that the factors that differentiate these two last categories are not developmental (at least, not chronological) issues. Nevertheless, the meaningfulness category was described by higher education and higher income when compared to the existential conflict category. Considering that there was no age difference between these two groups and that the described educational and income differences were found, it is possible that economic status may play a role (albeit small, as demonstrated by the effect size) in the perception of crisis of meaning, especially considering the current state of affairs in Brazil, whose economy is presently growing. This hypothesis is corroborated by the fact that job satisfaction plays an important role in predicting the categories of meaning. Those who were not satisfied with their jobs had a significant tendency to be existentially unsatisfied (i.e., they were more prone to be classified in the crisis of meaning, existentially indifferent, or existential conflict groups). Moreover, those who were not satisfied with their jobs presented both lower educational levels [$t(671.09) = 5.557, p < .001$] and lower financial incomes [$t(618.91) = 6.559, p < .001$], which were significantly correlated with the levels of the crisis of meaning ($r = -.18$ and $r = -.09, p < .001$, respectively)—relationships that had never previously been tested.

Furthermore, marital status also significantly differed across groups. The single participants and the participants in stable relationship articulated the lowest levels of meaningfulness when compared to the members of the married subset. As has previously been discussed (Damásio & Koller, 2013; Schnell, 2009), marriage seems to enhance meaning in life by highlighting a sense of belongingness and by driving life goals more objectively—through aims like building homes and raising children, for example (Schnell, 2009). It is important to note, however, that it is not the marriage itself that seems to have a “protective” effect: the married, divorced and widowed participants did not differ on any category of meaning, introducing the possibility that these groups are homogeneous in “developmental wisdom” attributes, which are linked to lifespan development, growth from negative experiences and autobiographical memory (Glück & Bluck, 2013). In other words, it is possible that older individuals (who generally include married, divorced and widowed persons) present higher levels of self-knowledge and well-established self-perspectives (Ryff & Singer, 2006) that can enhance meaningful life perspectives.

Last, the presence or absence of religiosity/spirituality did not differentiate those in the existential conflict and crisis of meaning groups. However, the existentially indifferent group members were generally less committed to such beliefs when compared to the members of the meaningfulness group. The conjunction of these results shows that engagement in a cosmic belief, while capable of fostering a sense of meaningfulness, does not protect one from suffering from a crisis of meaning. Rather, those who are not committed with regard to religiosity/spirituality are often classified as existentially indifferent, which means that they do not suffer from non-meaningfulness.

Categories and sources of meaning

Beyond the sociodemographic differences among the categories of meaning, significant differences were also found in the participants' commitment to the sources of meaning. The existentially indifferent group showed less commitment to all sources of meaning when compared to both the meaningfulness and existential conflict groups. For some sources of meaning (viz., community, development, fun, health, and power), the existentially indifferent group presented higher scores when compared to the crisis of meaning group. The crisis of meaning group, in turn, presented higher scores in religiosity, spirituality, self-knowledge, and tradition. It is important to note that what differentiates the crisis of meaning and existential conflict groups is their relative level of meaningfulness (the former being lower on this factor). This result therefore shows that not all sources of meaning function equivalently in promoting meaningfulness and preventing crises of meaning, as has previously been demonstrated (Schnell, 2011). One important point to note is that, both in Brazil and in Germany, religiosity, spirituality and self-knowledge were more endorsed by the crisis of meaning groups when compared to the existentially indifferent groups. This result corroborates Schnell's (2010, 2011) findings showing that the meaning-making process significantly varies in response to engagement with different sources of meaning.

The fact that the crisis of meaning group exhibited higher levels of self-knowledge and spirituality than the existentially indifferent group is curious and also corroborates Schnell's (2010) study. According to that author, a strong interest in self-knowledge can suggest a state of hyper-reflection, which may not be considered a positive attribute. In accordance with this proposition, some authors have shown that the *process* of searching and reflecting about the self tends to diminish positive affect and is considered a negative indicator of well-being (Silveira, Castro, & Gomes, 2011). In

contrast, the *comprehension* about the true self serves as an important positive predictor of well-being (Schnell, 2009; Ryff & Singer, 2006). This phenomenon could be described as “an arduous but worthwhile journey”.

Considering the variability that existed in the levels of engagement in sources of meaning across the different categories, we subsequently evaluated which sources of meaning predicted the levels of meaningfulness for each category. As expected, the meaningfulness group had the largest number of predictors (18), and generativity was the most powerful source ($\beta = .21, p < .001$). For the crisis of meaning and existentially indifferent groups, only six and four sources, respectively, were predictors of the levels of meaningfulness; among these, generativity was again the most significant predictor of meaningfulness ($\beta = .25, p < .001$) for both groups.

Surprisingly, only one source of meaning (spirituality) predicted levels of meaningfulness for the existential conflict group. Among all other β -values, this relationship had the largest magnitude ($\beta = .32, p < .001$)—that is, for the existential conflict group, spirituality is a very important factor. However, the existential conflict group was the only one in which generativity was not presented as a significant sources of meaningfulness ($\beta = .14, p = \text{n.s.}$). Is it possible that although individuals experiencing existential conflict find meaning in spirituality, they suffer for not being engaged in generativity? Or, in other words, is it possible that the absence of generativity is the cornerstone of the existential conflict group to the same extent that it's presence is one of the main aspects of the meaningfulness, as presented in this and other studies (Schnell, 2009; 2011)? Such questions require further investigation.

Another important point to note in the regression analyses is that, when considering the adjusted *r*-squared values for the four final multiple regression models (viz., those including only the significant predictors), the explained variance for the

existential indifference group was less than those found in all other groups' models, including the existential conflict group's model, in which only one source of meaning presented as a predictor of meaningfulness. This is strong evidence that, although they may be engaged in some source of meaning, existentially indifferent individuals seem to be living empty lives characterized by "everydayness" (Schnell, 2011), so that the sources weakly influence these subjects' lives. Although the existential conflict group presented fewer sources of meaning as predictors of meaningfulness, the sole source was more related to meaningfulness than the six predictive sources for the crisis of meaning model and the four sources of the existentially indifferent group model.

One important empirical finding to highlight is that the small number of sources of meaning that acted as significant predictors to the levels of meaningfulness for the crisis of meaning, existentially indifferent and existential conflict groups does not merely mean low engagement (or, in other words, low scores) with the sources. It also suggests a very discrepant pattern of responses among the subjects classified in these different categories of meaning, such that the discrepant answers tended to nullify significant effects of the sources of meaning on the dependent variable. In other words, it seems that high within-group variability masked any significant results for the large majority of sources of meaning. Thus the aspects that are endorsed (especially by those in conflicting states) highly vary from individual to individual, such that further qualitative, in-depth interviews would help to clarify the core aspects of this phenomenon.

Categories of Meaning and Psychological Functioning

Regarding the psychological variables, the meaningfulness group presented higher levels compared to the other groups on all variables except pessimism. In

general, the crisis of meaning group presented the poorest results, marked by higher levels on pessimism and lower levels on all “positive” variables, except for pessimism and self-esteem, where their scores were equivalent to the scores of the existential conflict group.

The existentially indifferent and existential conflict groups, in turn, showed very similar patterns of psychological functioning but differed with respect to subjective well-being (i.e., life satisfaction and subjective happiness) and self-esteem, such that the existentially indifferent group presented higher scores than the existential conflict group. Adding to the similarities between existential conflict and existentially indifferent groups, they presented equivalent scores in constructs that are understood as dispositional aspects of personality (viz., optimism, pessimism, agency hope, pathways hope, and self-efficacy; Carver & Scheier, 2002; Schwarzer, Boehmer, Luszczynska, Mohamed, & Knoll, 2005; Snyder, Rand, & Sigmon, 2002). These five constructs comprise a cognitive set of personal beliefs about personal capabilities (self-efficacy and pathways hope) and expectancies about the future (pessimism/optimism and agency hope) that, to a greater or a lesser extent, affect individuals’ actions toward the search and maintenance of their personal objectives (Robinson & Snipes, 2009). As has previously been described, these variables are positively related to MIL (DeWitz, Woolsey, & Wlash, 2009; Mascaro & Rosen, 2005; Ho et al., 2010) and likely impact the meaning-making process by facilitating or inhibiting the decision-making process made toward one’s personal objectives across the life span. Considering that both the existential indifference and existential conflict groups presented high levels of meaningfulness, it is not surprisingly that they did not differ in their cognitive systems reflected by the competence and control variables (Robinson & Snipes, 2009) that enhance MIL.

Our results suggest that the differences between the existentially indifferent and the existential conflict groups are not based on such personality characteristics but, instead, on differing levels of subjective well-being. Thus, considering that an individual's level of crisis of meaning is the main difference between falling into the existential indifference rather than the existential conflict group, it seems that levels of life satisfaction and happiness seem to predict higher levels of crisis of meaning. In a relatively recent paper, King, Hicks, Krull, and Del Graiso (2006) showed that one's levels of happiness (measured by levels of positive affect, PA) directly impact the perception of MIL (King et al., 2006). In this study, longitudinal and experimental evidence suggested that PA predicted MIL but not the reverse (King et al., 2006). Considering our results and such previous evidence (King et al., 2006), it is possible to hypothesize that lower levels of PA or, in our case, subjective happiness and life satisfaction, may also predict the perception underlying the crisis of meaning. Longitudinal and experimental studies are welcome to verify this hypothesis.

CONCLUSIONS

In recent years, the meaning-in-life field has enjoyed growing research interest. Several questions were empirically answered in this study, but an enormous array of new challenges has emerged. In this study, we presented a complex new category of meaning in life: the existential conflict group. Our results showed that this group might be going through socioeconomic and emotional difficulties—they were described by the lowest levels of education and income and also presented the worst scores on subjective well-being.

Although it has been possible to illuminate some features of this group, once again, many questions remained unanswered and might serve as lines of inquiry for future studies. Where does the existential conflict state come from? What is the core sensation of this state? How, in fact, are sources of meaning related to the levels of existential conflict? Is it possible to think that the conflicting group is only partially fulfilled and that its members suffer because of they are not completely fulfilled? Does gratitude really plays a role in how one perceives both the presence and crisis of meaning, as hypothesized before? Might this category be present in other cultures?

Further studies are necessary to help with answering these concerns. However, it is important to note that the existential conflict group is quite rare, including only 4% of our large Brazilian community sample. It is possible that future studies, just as Schnell (2010) attempted, may not find members of this category—not because of its inexistence but because of its rarity.

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CAPÍTULO VII

ARTIGO VI

**HOW SEARCH FOR MEANING INTERACTS WITH COMPLEX
CATEGORIES OF MEANING IN LIFE AND SUBJECTIVE WELL-BEING?**

**COMO A BUSCA POR SENTIDO INTERAGE COM COMPLEXAS
CATEGORIAS DE SENTIDO DE VIDA E BEM-ESTAR SUBJETIVO?**

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ABSTRACT

The last few years have seen tremendous growth in the literature on meaning in life (MIL). New findings have shown that the experiences of MIL may be complex and do not vary simply from low to high levels of MIL. Rather, the crisis of meaning and search for meaning seem to play important roles in how people describe their experiences of meaning. In this study, we evaluated how the search for meaning interacts with the crisis of meaning and with different categories of MIL (namely, meaningfulness, crisis of meaning, existential indifference and existential conflict). Furthermore, how the search for meaning moderates the relationships between categories of meaning and subjective well-being (SWB) was evaluated. Participants included 3,034 subjects (63.9% women) ranging in age from 18 to 91 ($M = 33.90$; $SD = 15.01$) years old from 22 Brazilian states. Of the total, 59.9% were single, 27.3% were married, 6.1% were divorced, 5.2% were in stable relationships (e.g., dating, engaged, or living with a partner), and 1.5% were widowed. Zero-order correlations and analyses of co-variance with bootstrapping procedures were implemented. Overall, our results showed that the search for meaning and crisis of meaning are positively related and that the search for meaning moderates how the categories of meaning interact with SWB. Further directions for future studies were proposed.

Key-words: Meaning in life, crisis of meaning, search for meaning, subjective well-being.

INTRODUCTION

In recent years, scientific research in psychology has struggled to understand and clarify the concept of meaning in life (MIL; Cohen & Kairns, 2012). In general, special attention has been directed toward the impact of having or not having MIL with respect to an individual's existence (Cohen & Kairns, 2012). In this regard, empirical research has uncovered several pieces of evidence showing that the presence of MIL has a positive impact on different aspects of human psychological and physical functioning, such as psychological well-being (Zika & Charbelaim, 1992; Ho, Cheung, & Cheung, 2010), psychological health (Brassai, Piko, & Steger, 2011), drug-abuse prevention (Waisberg & Porter, 1994), trauma recovery (Kashdan & Kane, 2011), and prevention of depression and anxiety disorders in cancer patients (Vehling et al., 2011), among others. Moreover, the lack of MIL has also proved to have negative consequences for human development. Studies have shown that lower levels of meaning in life are related to neuroticism (Zika & Chamberlain, 1992), perceived stress (Bauer-Wu & Farran, 2005), negative affect (Debats, van der Lubbe, & Wezeman, 1993), depression (Mascaro & Rosen, 2005), suicidal ideation (Edwards & Holden, 2001), drug addiction (Henrion, 2002), and other negative consequences.

Despite evidence suggesting that MIL is a positive marker of human functioning (Steger, 2009), several other questions have emerged in the field in recent years. In 2006, for example, King, Hicks, Krull and Del Graisio (2006) tried to answer to what extent meaning in life predicts or is predicted by levels of positive affect. The results achieved through a set of six studies strongly suggested that the perception that life has meaning is derived from dispositional levels of positive affect (i.e., high levels of positive affect lead people to think more positively about their lives, including the notion that life is meaningful). These results offered important initial evidence that started to deconstruct the notion that MIL was a predictor of happiness throughout the lifespan, as was suggested by Reker, Wong and colleagues (Reker, 2000, Reker & Fry, 2003; Reker, Peacock, & Wong, 1987; Reker & Wong, 1988; Wong, 1989).

More recently, empirical evidence has also questioned other theoretical assumptions underpinning MIL, such as that an individual's search for meaning is a positive indicator of personal motivational growth and that the lack of MIL is directly related to a crisis of meaning—i.e., existential crisis (Frankl, 1968; 1973). With regard

to the first assumption (i.e., the search for meaning is a positive indicator of personal motivational growth), Steger, Frazier, Oishi, and Kaler (2006) developed the Meaning in Life Questionnaire (MLQ) to evaluate both the levels of meaning in life and the levels of the search for meaning. Since their study was published, several other studies have shown that the search for meaning is positively related to negative outcomes of psychological functioning, such as fear, sadness, neuroticism and depression and is negatively correlated with indicators of psychological well-being (e.g., environmental mastery, relatedness, and self-acceptance; Steger et al., 2006). However, the search for meaning seems not to be negative at all. Moderation studies have shown that the search for meaning associates positively with well-being for people who already have high levels of MIL (Cohen & Cairns, 2012; Park, Park, & Peterson, 2010). Park et al. (2010) argues that, on one hand, when people already have high levels of MIL, they have a foundation that allows the search for further meaning to be a modification and expansion process. On the other hand, when people lack or have low levels of MIL, the search for meaning can be difficult and frustrating. Those statements are similar to the conclusion drawn by Cohen and Cairns (2012), who also found that the negative relationship between the search for meaning and happiness is moderated by the levels of meaning in life and self-actualization.

Beyond the discussions of to what extent and in which circumstances the search for meaning can be considered a positive or negative factor, Schnell (2010) has struggled to empirically evaluate another theoretical assumption held in the MIL literature: namely, that a lack of MIL is directly related to a crisis of meaning (Frankl, 1963; Frankl, 1978). The rationale proposed by Schnell (2010) was the following: Assuming that a lack of MIL necessarily directs an individual to existential crisis implies that the crisis of meaning and meaningfulness are two poles of a unique *continuum* (Schnell, 2010). Through an unsystematic review of the literature, Schnell (2010) showed that the main psychometric instruments for evaluating MIL (e.g., the Purpose in Life Test [PIL], Crumbaugh & Maholick, 1964; the Sense of Coherence Scale [SOC], Antonovsky, 1993; and the Life Regard Index [LRI], Battista and Almond, 1973) all used this rationale. All of these scales were created based on a one-dimensional perspective in which individuals' low scores on MIL would reflect boredom, despair, and existential crisis (i.e., supposedly negative outcomes derived

from the lack of MIL), whereas high scores would reflect meaningfulness (Schnell, 2010).

Trying to evaluate the consistency or inconsistency of this assumption, Schnell and colleagues (Schnell, 2009, 2010, 2011; Schnell & Becker, 2006, 2007) developed the Sources of Meaning and Meaning in Life Questionnaire (SoMe), which, beyond evaluating 26 different sources of meaning, it evaluates both meaningfulness and crisis of meaning through two separate scales. In a series of studies, the authors showed that it was more psychometrically sound to evaluate meaningfulness and crisis of meaning as two different constructs instead of as a single dimension (Schnell, 2010, 2011; Schnell & Becker, 2007). These results directed Schnell (2010) to further findings. If people can have different levels of both crisis of meaning and meaningfulness, it is also possible that one can find different categories of meaning in life, such as the following:

- 1) Meaningfulness: high meaningfulness and low crisis of meaning;
- 2) Crisis of meaning: low meaningfulness and high crisis of meaning;
- 3) Existential indifference: low meaningfulness and low crisis of meaning; and
- 4) Existential conflict: high meaningfulness and high crisis of meaning.

Empirically, these propositions have been corroborated. In a representative German sample ($N = 603$), 61% of participants were classified as experiencing meaningfulness, 35% as experiencing existential indifference, and 4% as having a crisis of meaning. Several psychological and sociodemographic differences emerged among the subjects with regard to the different categories. For example, the existentially indifferent were younger than those experiencing meaningfulness. With regard to sources of meaning, the existentially indifferent individuals scored lower on all sources of meaning when compared to those experiencing meaningfulness and also scored lower in some sources (viz., self-knowledge, spirituality, religiosity and generativity) when compared to the crisis of meaning category members. In a second study ($N = 135$), Schnell (2010) also showed that the existentially indifferent category members presented higher levels of life satisfaction and lower levels of anxiety and depression when compared to those individuals having a crisis of meaning. On the other hand, when compared to those experiencing meaningfulness, significant differences were found only in life satisfaction but not in depression or anxiety. Thus, although the

participants who were classified as existentially indifferent showed less commitment to the sources of meaning, they did not exhibit a decline in their levels of mental health regardless of being less satisfied with their lives.

In Brazil, a previous study (Damásio & Koller, 2013a) using the same sample of this study, showed that the four categories of meaning as proposed by Schnell (2010) held. From the total sample ($N = 3.034$), 80.7% were classified as experiencing meaningfulness ($n = 2.450$), 9.6% as being existentially indifferent ($n = 292$), 5.7% as having a crisis of meaning ($n = 172$), and 4.0% as experiencing existential conflict ($n = 120$). The results showed that people classified as experiencing meaningfulness were more highly educated and reported higher financial incomes when compared to the other groups. It was also shown that the pattern of engagement with different sources of meaning varied significantly across the groups. The existentially indifferent presented less commitment to all sources of meaning when compared with both those experiencing meaningfulness and existential conflict. Moreover, regarding psychological functioning, it was shown that the group experiencing meaningfulness presented higher levels of optimism, hope (agency and pathways), general self-efficacy, general self-esteem, subjective happiness and life satisfaction when compared to the other groups. In general, having a crisis of meaning yielded the worst results, with higher levels of pessimism and lower levels on all “positive” variables. The existentially indifferent and existential conflict groups presented very similar patterns of psychological functioning but differed in subjective well-being (life satisfaction and subjective happiness) and in self-esteem, such that existentially indifferent individuals presented higher scores than members of the existential conflict group (for more information, see Damásio & Koller, 2013a).

CURRENT STUDY

Previous studies have provided evidence that, in some circumstances, the search for meaning can act as both a positive and negative psychological variable. Furthermore, it has been found that some people may present complex experiences of meaning (Damásio & Koller, 2013a; Schnell, 2010). However, as far as we know, no studies have evaluated how the search for meaning relates to a crisis of meaning and

with the different categories of meaning. Aiming to aggregate further knowledge in the MIL literature, this study had the following objectives:

- 1) To evaluate how the search for meaning is related to both the crisis of meaning and meaningfulness;
- 2) To evaluate if different levels of the search for meaning can moderate the relationships between categories of meaning and subjective well-being.

METHOD

Participants

The participants were 3,034 subjects (63.9% women) ranging in age from 18 to 91 ($M = 33.90$; $SD = 15.01$) years old from 22 Brazilian states. From the total, 59.9% were single, 27.3% were married, 6.1% were divorced, 5.2% were in stable relationship (e.g., dating, engaged, or living with a partner), and 1.5% were widowed. Participants were invited to participate in the study through different modalities. A total of 91.4% answered the questionnaires in a web-based platform, whereas the remaining 8.6% responded to the questionnaires in a paper-and-pencil form. Invitations were sent through different sources, such as personal and media invitations, recruitment within social and occupational institutions (especially for adults and the elderly), and the snowball technique (Patton, 1990).

Instruments

Bio-sociodemographic questionnaire: This instrument was developed to evaluate sociodemographic characteristics of the sample (e.g., gender, age, marital status, educational level, financial income, job satisfaction, religiosity/spirituality, presence or absence of chronic illness or special needs, etc.).

Sources of Meaning and the Meaning in Life Questionnaire (SoMe, Schnell & Becker, 2007; Brazilian version adapted by Damásio, Schnell, & Koller, 2013): This instrument is a 151-item questionnaire (ranging from 0 – totally disagree to 5 – totally agree) that assesses 26 different sources of meaning, encompassed in five larger meaning dimensions (“vertical self-transcendence,” “horizontal self-transcendence,” “self-actualization,” “order,” and “well-being and relatedness”). The SoMe also evaluates levels of meaningfulness (e.g., “I lead a fulfilled life”) and crisis of meaning

(e.g., “I feel pain from finding no purpose in my life”) through two different scales. Table 1 presents the structure of the sources of meaning of the SoMe in the present sample. Its scores range from 1 to 5. The expected bi-factorial solution of the meaningfulness and crisis of meaning factors exhibited excellent fit indexes: TLI = .98; CFI = .98; RMSEA = .075 (.070 - .081). The meaningfulness and crisis of meaning factors were negatively correlated ($r = -.61$; $p < .001$).

Meaning in Life Questionnaire (Steger et al., 2006; Brazilian version adapted by Damásio & Koller, 2013b): The MLQ is a 10-item instrument that encompasses two different constructs: the presence of meaning (MLQ-P; e.g., “My life has a clear sense of purpose”) and the search for meaning (MLQ-S; e.g., “I am seeking a purpose or mission for my life”). Each construct is evaluated through five items. In this study, only the search for meaning scale was employed. Its scores vary from 5 to 35. The goodness-of-fit indexes were as follows: CFI: .97; TLI = .95; RMSEA .149 (.130 - .168); SRMR = .058. Alpha reliability was .85.

Subjective Happiness Scale (SHS, Lyubomirsky & Lepper, 1999; Brazilian version adapted by Damásio, Zanon, & Koller, in press.) The instrument is a 4-item Likert-type scale (ranging from 1 to 7 points, with different anchors) that assesses subjective happiness using a single-factor solution. The scores range from 4 to 28 with higher scores representing higher levels of subjective happiness. In this study, the SHS exhibited excellent goodness-of-fit indexes: CFI = 1.00; TLI = .99; RMSEA (90% CI) = .037 (.017 - .061); SRMR = .042.

Satisfaction with Life Scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985; Brazilian version adapted by Gouveia, Milfont, Fonseca, & Coelho, 2009) The SWLS is a 5-item Likert-type scale (ranging from 1 – totally disagree to 5 – totally agree) that assesses satisfaction with life using a single-factor solution. The scores range from 5 to 25 with higher scores representing higher levels of subjective happiness. In this study, the SWLS exhibited excellent goodness-of-fit indexes: CFI = 1.00; TLI = .99; RMSEA (90% CI) = .034 (.021 - .049); SRMR = .011.

Data analysis

Initially, zero-order correlations were employed to examine the relationships among the search for meaning, crisis of meaning, meaningfulness and subjective well-being (viz., subjective happiness and life satisfaction) variables. Then, an ANOVA

evaluated how the levels of the search for meaning varied across the different categories of meaning. Then, it was investigated if the search for meaning could moderate the relationship among the categories of meaning and subjective well-being.

The four categories of meaning are described as follows:

- 1) Meaningfulness: High meaningfulness and low crisis of meaning;
- 2) Crisis of meaning: Low meaningfulness and high crisis of meaning;
- 3) Existential indifference: Low meaningfulness and low crisis of meaning;
- 4) Existential conflict: High meaningfulness and high crisis of meaning.

Participants were divided into high and low groups with respect to the mean of the rating scale ($\leq 2.9 / \geq 3$, range 0-5; Schnell, 2010). The search for meaning variable supported divisions into three groups: -1 *SD* below the mean (group 1; low search); +/-1 *SD* around the mean (group 2; medium search); and +1 *SD* above the mean (group 3; high search).

Thus, a 4x3 Factorial MANCOVA was employed. The independent variables (factors) were the following: the categories of meaning (four levels) and search for meaning (three levels). The dependent variables were subjective happiness and satisfaction with life. The covariates were age and gender. For the MANCOVAs, bootstrapping procedures (1.000 re-samplings with a 99% confidence interval for the mean difference, ΔM) were employed to accord greater reliability to the results, to correct for the non-normal distribution of the sample and the difference in group sizes and to present 99% confidence intervals for the mean differences (Haukoos & Lewis, 2005). The effect sizes were calculated using eta-squared (η^2). To correct for the Type-I error associated with multiple comparisons, Bonferroni post-hoc tests were employed (Abdi, 2007).

RESULTS

As expected, meaningfulness correlated positively with both satisfaction with life and subjective happiness and negatively with crisis of meaning. The search for meaning variable showed negative correlations with both subjective well-being and subjective happiness and a positive correlation with the crisis of meaning variable. In

terms of the coefficient of determination (r^2), the search for meaning and crisis of meaning showed 6.65% of shared variance. The highest correlations were found between subjective happiness and satisfaction with life ($r = .661$, $r^2 = .44$) and between subjective happiness and crisis of meaning ($r = .630$, $r^2 = .40$).

Table 1.

Zero-order Correlations among Different Meaning in Life Related Constructs and Subjective Well-Being Variables

Variables	Correlations				
	1	2	3	4	5
1. Search for meaning	1	-	-	-	-
2. Crisis of meaning	.258**	1	-	-	-
3. Meaningfulness	.069*	-.608**	1	-	-
4. Satisfaction with life	-.148**	-.597**	.538**	1	-
5. Subjective happiness	-.161**	-.630**	.523**	.661**	1

Note: ** $p < 0.01$; * $p < .05$

To provide greater detail to these results, a factorial MANCOVA was employed. From the total sample, 80.7% of participants were classified as experiencing meaningfulness ($n = 2.450$), 9.6% as being existentially indifferent ($n = 292$), 5.7% as having a crisis of meaning ($n = 172$), and 4.0% as having existential conflict ($n = 120$). Regarding the search for meaning, 17.5% were classified as exhibiting low search tendencies (group 1, $n = 532$), 27.0% as exhibiting medium search tendencies (group 2, $n = 818$), and 55.5% as exhibiting high search tendencies (group 3, $n = 1684$).

Regarding the differences in the search for meaning within the different categories of meaning, significant omnibus results were found [$F(3, 3030) = 43.114$, $p < .001$; $\eta^2 = .04$], with significant effects among all comparisons ($p < .001$). The existential conflict group presented higher levels when compared to all other categories. The existential indifference group, in turn, presented lower levels when compared to all other categories. Finally, the individuals experiencing meaningfulness presented lower levels when compared to the crisis of meaning group members (See Table 2 for descriptive statistics).

Table 2.

Descriptive Statistics of Search for Meaning, Subjective Happiness and Life Satisfaction for Different Categories of Meaning

Categories of Meaning	Search for meaning	
	Mean [99% C.I]	SD
Meaningfulness	23.15 [22.87 – 23.43]	7.05
Crisis of meaning	24.95 [23.91 – 26.00]	6.79
Existential indifference	20.34 [19.54 – 21.15]	7.14
Existential conflict	28.55 [27.30 – 29.81]	5.28

The results presented in this study and found previously (Damásio & Koller, 2013a) have shown that the search for meaning is related to the categories of meaning and that categories of meaning are also related to levels of subjective well-being (Damásio & Koller, 2013a). Considering these results, we sought to examine to what extent the different levels of the search for meaning could moderate the relationships between categories of meaning and the constructs of subjective happiness and life satisfaction. Thus, the search for meaning scores were divided into three categories (low, medium and high search), and a factorial MANCOVA was implemented.

Significant omnibus results were found for both independent variables: categories of meaning [$F(6, 6028) = 124.648, p < .001; \eta^2 = .11$; observed power = 1.00] and search for meaning [$F(4, 6030) = 5.730, p < .001; \eta^2 = .004$; observed power = .982]. With respect to the search for meaning, those individuals who presented higher levels of the search for meaning showed less life satisfaction and less subjective happiness when compared to those classified as exhibiting medium and low search for meaning ($p < .001$). Further, when comparing the medium search for meaning (group 2) and the low search for meaning (group 1) participants, marginal significant differences were found for subjective happiness ($p = .052$) but not for life satisfaction ($p = .25$). Interaction effects (the categories of meaning vs. the search for meaning) were also found for subjective happiness [$F(6, 3008) = 2.314, p < .05; \eta^2 = .005$; observed power

= .81] but not for satisfaction with life [$F(6, 3008) = .977, p = .44; \eta^2 = .002$; observed power = .82]. These results suggest that the levels of the search for meaning moderate the relationships among the categories of meaning and subjective happiness, although the effect sizes are low (See table 3 for descriptive statistics).

Table 3.

Descriptive Statistics of Subjective Happiness for Different Categories of Meaning and Different Levels of Search for Meaning

Categories of Meaning	Subjective Happiness Scores					
	Low search		Medium search		High search	
	Mean	SD	Mean	SD	Mean	SD
Meaningfulness	22.53	4.01	21.34	4.11	20.80	4.15
Crisis of meaning	11.52	6.10	13.32	5.13	12.36	4.15
Existential indifference	18.83	4.77	17.35	5.17	16.36	4.77
Existential conflict	23.00	.000	15.70	4.74	14.63	4.61
Total	21.52	4.87	20.35	4.82	19.58	4.96

Note: SD - standard deviation

To further evaluate this result, subsequent ANOVAs were run for each level of the search for meaning. Our results showed that the levels of the search for meaning moderated some of the relationships among the levels of subjective happiness for the different categories of meaning (See Table 4). For those who exhibited low search for meaning, no significant differences in subjective happiness were found between the meaningfulness and existential conflict groups ($p = 1.000$). However, when comparing medium and high search for meaning levels, the meaningfulness group presented higher levels when compared to the existential conflict group ($p < .001$). This result highlights the fact that individuals who are in a state of existential conflict but are also only weakly searching for meaning exhibit the same levels of happiness as individuals in the meaningfulness group.

Table 4.

ANOVAs among Categories of Meaning and Subjective Happiness for Different Levels of Search for Meaning

Categories of meaning (Bonferroni Post-hoc test comparisons)		Subjective Happiness					
		Low search		Medium Search		High Search	
		Mean Difference	<i>p</i> -value	Mean Difference	<i>p</i> -value	Mean Difference	<i>p</i> -value
Meaningful	Crisis of meaning	11.007	.000	8.026	.000	8.435	.000
	Existential indifference	3.697	.000	3.991	.000	4.440	.000
	Existential conflict	-.469	1.000	5.642	.000	6.169	.000
Crisis of meaning	Meaningful	-11.007	.000	-8.026	.000	-8.435	.000
	Existential indifference	-7.310	.000	-4.035	.000	-3.995	.001
	Existential conflict	-11.476	.002	-2.384	.274	-2.266	.000
Existential indifference	Meaningful	-3.697	.000	-3.991	.000	-4.440	.000
	Crisis of meaning	7.310	.000	4.035	.000	3.995	.020
	Existential conflict	-4.167	1.000	1.651	.717	1.729	.000
Existential conflict	Meaningful	.469	1.000	-5.642	.000	-6.169	.001
	Crisis of meaning	11.476	.002	2.384	.274	2.266	.020
	Existential indifference	4.167	1.000	-1.651	.717	-1.729	.000

The search for meaning also moderated the relationships between the crisis of meaning and existential conflict groups in relation to levels of subjective happiness. For those who presented medium levels of the search for meaning, no significant differences in the levels of subjective happiness were found between the crisis of meaning and existential conflict groups ($p = .274$), whereas for the other two groups (i.e., low search and high search), the existential conflict group presented lower levels of subjective happiness when compared to the crisis of meaning group ($p < .0001$). Similar results were found for the relationships between the existential conflict and existentially indifferent groups. When levels of the search for meaning were high, the existential conflict group presented lower levels of subjective happiness in comparison to the existentially indifferent group. This result, however, was not duplicated for those who were low or medium in the search for meaning ($p = 1.00$ and $p = .717$, respectively). Figure 1 presents a graphical illustration of all such variability.

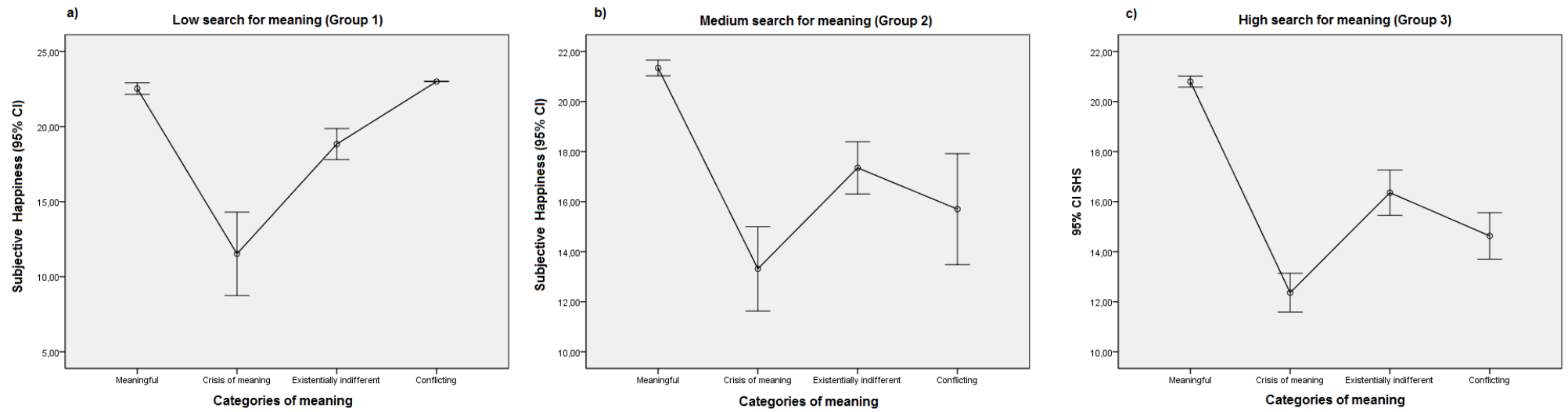


Figure 1. Relations among Categories of Meaning and Subjective Happiness for Different Levels of Search for Meaning.

DISCUSSION

Our findings included several important results. A new, although expected finding was presented: The search for meaning positively relates to the crisis of meaning. The relationship between the search for meaning and the crisis of meaning has never previously been tested in the empirical literature. In the theoretical domain, authors have offered distinctly different positions. Frankl (1963), for example, argued that the search for meaning must be held constant because one's perception of meaningfulness tends not to be fixed and unchangeable. According to this perspective, as life circumstances change—because of natural development or unexpected happenings—one must search for new structures of meaning in these different life stages. Other authors, however, have suggested that the search for meaning happens only when individuals' needs are frustrated (Baumeister, 1991; Kingler, 1998). According to Baumeister (1991), people search for meaning when they do not realize meaning in their lives or when they are facing stressful events (e.g., spousal death) that require new adjustments and re-elaborations of their existence through a search for new structures of meaning. Yet another approach (Reker, 2000) has suggested that both situations are possible: The search for meaning can be fostered either by a life-affirming or by a deficit-based perspective.

Curiously, meaningfulness and the search for meaning tend to have no significant or, at most, very small correlations (Damásio & Koller, 2013a; Steger et al., 2006; Park, Park, & Peterson, 2010). This result suggests that, in fact, the search for meaning seems not to depend on levels of meaningfulness. However, we detected a positive correlation between the search for meaning and crisis of meaning variables. Thus, this result started to clarify the nature of the existential aspect of the search for meaning. Individuals experiencing a crisis of meaning are those who are suffering from finding no meaning in their lives (Schnell, 2009, 2010; Schnell & Becker, 2007). Thus, meaningfulness is an important piece of their existence, so they naturally search for it. Although this result may seem logical at first glance, it raises another question: If an individual is experiencing a crisis of meaning *and* he or she is searching for meaning, it means that the search for meaning has not yet reduced one's levels of existential crisis. So, to what extent and in what circumstances may the search for meaning, in fact, favor the meaning-making process and the existential crisis reduction? If the search for meaning is positively associated with crisis and tends to present very small or no significant correlations with meaningfulness, what, then, are the motivational bases of the search for meaning? Does crisis predict the search for meaning, or does the search for meaning predict the crisis of meaning? Longitudinal studies are necessary to clarify these

conundrums. More specifically, further studies are necessary to investigate the psychological consequences of a long-term search for meaning.

Aiming to further our understanding of these results, we evaluated how the search for meaning interacts with different categories of meaning and subjective well-being and life satisfaction. Among all categories of meaning, the existential conflict group presented higher levels of the search for meaning. This result was not expected. Rather, it was expected that the crisis of meaning (i.e., low meaningfulness and high crisis) group would present the highest scores, insofar as, by its very characteristics, this group might be considered the one with highest existential suffering.

The fact that the existential conflict group presented the highest levels of the search for meaning suggests that being in such a complex existential state might be very uncomfortable in existential terms. The members of this group are those who experience high levels of crisis and also the highest levels of search for meaning. According to Damásio and Koller (2013a), the existential conflict group may be composed by those who find meaningfulness in some areas of their lives but who are still struggling to find meaning in other areas. If this rationale is correct, it assists us in understanding the reason that this group presented the highest levels of the search for meaning. However, an intriguing situation arises. Once that search for meaning seems not to be a positive predictor of meaningfulness (Cohen & Kairns, 2012; Steger et al. 2006), and that the search for meaning also is positively related to the crisis of meaning, it is not known if the search for meaning will assist the individuals in this group to exit their existential conflict category. As stated by Park et al. (2010), the search for what makes life meaningful can be uncomfortable and counter-productive, at least when judged by psychological indices of well-being. Thus, the development of physical and psychological health of this group is one of several lines of investigation worthy of further longitudinal evaluation.

Finally, aiming to evaluate to what extent different levels of the search for meaning could moderate the associations between the categories of meaning and subjective well-being, a factorial MANCOVA and subsequent ANOVAs were employed. The results showed that the levels of the search for meaning moderated the associations between the categories of meaning and subjective happiness but not between these categories and life satisfaction. The meaningfulness and existential conflict groups presented the same levels of happiness when the search for meaning was low. In a previous work, King et al. (2006) used transversal, longitudinal and experimental designs to show that the level of positive mood (measured as positive affect) was a strong predictor of meaning in life experiences. Considering this result,

we argue that even in the face of high levels of a crisis of meaning (i.e., existential conflict group membership), when individuals have high levels of happiness, they must see their lives as comfortable enough for not trying to search for meaning. However, this result may not be trustworthy because only two subjects were grouped in this category (viz., existential conflict with a low search for meaning). Although the moderation effect must be cautiously appraised, this result, in turn, highlights another important consideration: It seems very rare to find people in a state of existential conflict who are not simultaneously searching for meaning. This finding corroborates the assumptions previously mentioned that the experience of existential conflict may be a very uncomfortable existential state that individuals struggle to leave behind, most likely by searching for new structures of meaning.

When the search for meaning had medium strength, the levels of subjective happiness were similar between the existential conflict and crisis of meaning groups; also, the existential conflict and the existentially indifferent groups were equivalent. Thus, when the search for meaning has medium strength, individuals experiencing existential conflict present lower scores on subjective happiness only when compared to the meaningfulness group. This result thereby shows that the differences among the existentially indifferent and those individuals experiencing existential conflict, as well as between the existential conflict and crisis of meaning groups, are exacerbated in the high search for meaning category.

This result seems to underscore and strengthen the notion that growing levels of the search for meaning might, in general, decrease levels of subjective happiness. As seen in the descriptive statistics (Table 3), for all categories of meaning, when the search for meaning increases, subjective happiness decreases (although the significance of these differences was not tested). Considering this pattern, it is necessary to test these findings in further samples to verify whether they are replicable.

CONCLUSION

Throughout this study, several new findings were presented for the MIL literature. First, the associations between the search for meaning and crisis of meaning were presented. Further, we tried to elaborate upon these results by evaluating how the search for meaning relates to different categories of meaning and how the search for meaning might moderate the relationships of the categories of meaning with subjective well-being constructs.

The fact that the crisis of meaning and the search for meaning were positively correlated raises several questions regarding the function that the search for meaning plays on

one's existential life. Some research has supported the idea that the search for meaning is positively associated with well-being indicators in individuals who already have high levels of meaning in life (Brassai, Piko, & Steger, 2012; Cohen & Kairns, 2012; Park et al. 2010). In particular, Steger, Kashdan, Sullivan, & Lorentz (2008) have conducted an extensive evaluation of the personality factors and cognitive styles that contribute to the presence of meaning and search for meaningful relationships. Notwithstanding their efforts, many questions still remains unanswered. For example, in terms of longitudinal development, what are the outcomes that a stable search for meaning leads to? Does the search for meaning serve as an important indicator of the human meaning-making process? Or, does it assist individuals in reducing their levels of crisis of meaning? To answer these questions, longitudinal and experimental studies are necessary. By using such these approaches, we will be able to better understand, for example, the causal direction between the positive relationship that exists between the crisis of meaning and the search for meaning.

It is also important to note that both meaningfulness and crisis of meaning showed only small correlations with the search for meaning. So, if these two existential states (crisis and meaningfulness) are so poorly associated with the search for meaning, what, in fact, predicts such a search? What are the motivational bases that make people start to "search for meaning"? Furthermore, what does the search for meaning really mean in terms of behavior (i.e., how people actually search for meaning)? Is it by trying to deeply think about his or her life? Is it trying to more deeply and frequently engage in important aspects of their lives (such as sources of meaning)? Is it trying to live new experiences, in a kind of true-self development? Last, is it possible to think about a pattern of behaviors linked to the search for meaning, or do these behaviors markedly change from individual to individual and across the life span? Although this line of questioning seems basic, such issues have not yet been discussed. Consequently, the results presented in this study raise many more questions than answers.

The MIL field is not even close being saturated by empirical research. Future studies are welcome to further evaluate the results presented in this study and to start answering all of the concerns raised above.

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CAPÍTULO VIII

ARTIGO VII

**ATTRITION RATES IN A BRAZILIAN LONGITUDINAL SURVEY FOCUSED ON
POSITIVE PSYCHOLOGICAL CHARACTERISTICS: THEORETICAL,
EMPIRICAL AND METHODOLOGICAL CONSIDERATIONS**

**TAXAS DE EVASÃO EM UM ESTUDO LONGITUDINAL BRASILEIRO FOCADO
EM CARACTERÍSTICAS PSICOLÓGICAS POSITIVAS: CONSIDERAÇÕES
TEÓRICAS, EMPÍRICAS E METODOLÓGICAS**

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ABSTRACT

This study aimed to evaluate the extent to which sociodemographic and psychological variables influenced participants' intention to participate in future waves of a positive psychology study. The participants were 2,551 Brazilian subjects (63% female), ranging in age from 18 to 82 years, from 21 different states of Brazil, who participated in the first wave of the project. Questionnaires regarding optimism, hope, meaning in life, life satisfaction, subjective happiness, self-esteem and self-efficacy were administered. Of the total, 37.7% of the participants did not agree to participate in the subsequent waves of the study. Our results showed that women were more likely to agree to participate than men; however, those who agreed presented higher levels in all "positive" psychological variables measured and lower levels on the "negative" variables. This same result, however, was not observed in the male sample in that only pessimism influenced males' intention with regard to participation in the future waves of the study. Our results show an intriguing difference in trends across gender. Implications for longitudinal research in positive psychology are discussed.

Keywords: Positive psychology; longitudinal; research; gender; Brazil.

INTRODUCTION

Positive psychology can be understood as the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups and institutions (Gable & Haidt, 2005). This political and scientific movement was officially launched in January 2000, when Seligman and Csikszentmihalyi (2000) edited a special issue of *American Psychologist* claiming the need for a greater effort in psychological research toward expanding our knowledge of what makes life worth living. Since this publication, the field has grown tremendously, with increasing numbers of papers, books, scientific journals and post-graduate programs focused on the study of positive development (Gable & Haidt, 2005; Linley, Joseph, Harrington, & Wood, 2006).

With the balance of research focused on comprehending psychopathology and disease, as well as human strengths and well-being, psychology as a science has gained a much greater comprehension of human functioning. Several studies have provided evidence, for example, of how positive emotions are related to such factors as physical and mental health (Schöllgen, Huxhold, Schmiedek, 2012; Worthington Jr. & Scherer, 2004), the physiological correlates of flow (Mansfield, Oddson, Turcotte, & Couture, 2012), the long-term predictors of life satisfaction in different cultural contexts (Daukantaitė & Zukauskienė, 2012; Meulemann, 2001), and so forth. In other areas, such as education, the efforts of “positive” psychologists have expanded our comprehension of the relationship of positive psychological characteristics to academic achievement (e.g., Marques, Pais-Ribeiro, Lopez, 2011), and how psychologists and educators can enact preventive practices within the school setting (e.g., Terjesen, Jacofsky, Froh, & DiGiuseppe, 2004).

As is true for any other area, much of this acquired knowledge arose from longitudinal studies. Longitudinal studies provide one of the strongest methodologies for studying developmental changes in terms of the cognitive, emotional and behavioral characteristics of the human being (Wolke et al., 2009). This success is related to the fact that causal inferences in psychological research can be made with more confidence by using longitudinal or experimental designs (Toh & Hernán, 2008). Despite its potential power, longitudinal research can also be limited with regard to selection biases, presented in terms of follow-up losses (also known as attrition or drop-out rates).

Attrition is a very common issue in longitudinal designs; it is almost impossible to conduct a longitudinal study without losing respondents throughout the process (de Leeuw,

2005). Attrition in longitudinal studies originates from different sources, of which the most frequent are 1) failure of the potential respondent to locate the research unit, 2) failure of the researchers to contact the potential respondent, and 3) failure to obtain cooperation from the potential respondent for participation in subsequent waves of the study (de Leeuw, 2005; Lepkowski & Couper, 2002).

Moreover, attrition can be random or systematic (Miller & Hollist, 2007). Random attrition refers to respondents who drop out for different reasons not directly related to the study (e.g., moved to another city, had a car accident and could not participate in the study on that particular day, passed away, etc.). Beyond reducing the number of participants (which can sometimes be very problematic, especially in studies with low N), random attrition does not tend to be very negative, exactly because of its random nature. Systematic attrition, in turn, occurs when specific groups of people drop out from the study more frequently than others (Miller & Hollist, 2007). Thus, systematic attrition tends to be more problematic if it is related to some specific variable within the study. If the attrition rates are systematic, the results of a longitudinal study can be seriously threatened, affecting the external validity of the study (de Leeuw, 2005; Matthews et al., 2006), especially when the attrition rates are directly associated with the outcome variable of interest (Wolke et al., 2009). In these cases, the remaining sample is not generalizable to the original population that was initially sampled (Miller & Hollist, 2007).

Considering that dropout can strongly influence the results and conclusions of longitudinal studies, we aimed in the current article to evaluate the role of sociodemographic and psychological characteristics on the intention to participate in the subsequent waves of a Brazilian national survey entitled “Meaning in life and subjective well-being: Interactions with optimism, hope, self-efficacy and self-esteem in different stages of the life span”.

METHOD

Participants

The participants of this study were 2,551 Brazilian subjects (63% female), ranging in age from 18 to 82 years old ($M = 30.47$; $SD = 11.29$), from 21 different states of Brazil, who agreed to participate in the first wave of the project. Of the total, 37.7% of the participants did not agree to participate in the next waves of the study.

Instruments

Sociodemographic Questionnaire: This instrument was used to evaluate sociodemographic characteristics of the sample (e.g., gender, age, marital status, income, educational level, religiosity/spirituality, presence or absence of chronic illness and special needs).

Meaning in Life Questionnaire (Steger et al., 2006, Brazilian version adapted by Damásio & Koller, 2013): The MLQ is a 10-item instrument that assesses two different constructs: the presence of meaning – MLQ-P (e.g., “My life has a clear sense of purpose”) and the search for meaning – MLQ-S (e.g., “I am seeking a purpose or mission for my life”). Each construct is evaluated by five items. In this study, only the presence of meaning scale was employed. The scores range from 5 to 35. Goodness-of-fit indexes were CFI = .99, TLI = .98, RMSEA .079 (.065 - .094) and SRMR = .023. The alpha reliability was .85.

Sources of Meaning and the Meaning in Life Questionnaire (SoMe, Schnell & Becker, 2007; Brazilian version adapted by Damásio, Schnell, & Koller, 2013) is a 151-item questionnaire (ranging from 0 = totally disagree to 5 = totally agree) that assesses 26 different sources of meaning, encompassed within five larger meaning dimensions (vertical self-transcendence, horizontal self-transcendence, self-actualization, order, and well-being and relatedness). The SoMe also evaluates the level of meaningfulness (e.g., “I lead a fulfilled life”) and the level of crisis of meaning (e.g., “I feel pain from finding no purpose in my life”) by two different scales. Table 1 presents the sources of meaning according to the SoMe in the present sample. The scores range from 1 to 5. In this study, only the crisis of meaning subscale was used. Goodness-of-fit indexes were CFI = .99, TLI = .99, RMSEA (90% CI) = .06 (.05 - .07) and SRMR = .036.

Adult Hope Scale (AHS, Snyder et al., 1991; Brazilian version adapted by Pacico, Bastianello, Zanon, & Hutz, *in press*). The AHS is a 12-item Likert-type scale (ranging from 1 = totally false to 5 = totally true), with four items assessing agency, four items assessing pathways, and four distracter items that are not considered for analysis. Agency refers to the sense of determination to successfully meet goals. Pathways refer to the capacity to generate successful plans to meet goals. The scores for both agency and pathways range from 4 to 20. In the current study, the goodness-of-fit indexes for the expected bi-factorial solution were CFI = .98, TLI = .97, RMSEA (90% CI) = .072 (.064 - .080) and SRMR = .051.

Life Orientation Test-Revised (LOT-R - Scheier, Carver, & Bridges, 1994; Brazilian version adapted by Bastianello, Zanon, Pacico, Reppold, & Hutz, 2012): The LOT-R evaluates one’s levels of optimism (e.g., “In uncertain times, I usually expect the best”) and pessimism (e.g., “I rarely count on good things happening to me”). It is composed of ten items

(4 fillers), answered on a five-point Likert scale (1 = totally disagree; 5 = totally agree). For both the pessimism and optimism scales, scores range from 4 to 20. In this study, the expected bi-factorial solution presented excellent goodness-of-fit indexes: CFI = .98, TLI = .97, RMSEA (90% CI) = .079 (.068 - .091) and SRMR = .047.

Subjective Happiness Scale (SHS, Lyubomirsky & Lepper, 1999; Brazilian version adapted by Damásio, Zanon, & Koller, in press.) is a 4-item Likert-type scale (ranging from 1 to 7 points, with different anchors) that assesses subjective happiness by a single-factor solution. The scores range from 4 to 28. Higher scores correspond to higher levels of subjective happiness. In this study, the SHS presented excellent goodness-of-fit indexes: CFI = 1.00, TLI = .99, RMSEA (90% CI) = .050 (.028 - .075) and SRMR = .012.

Satisfaction with Life Scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985; Brazilian version adapted by Gouveia, Milfont, Fonseca, & Coelho, 2009) is a 5-item Likert-type scale (ranging from 1 = totally disagree to 5 = totally agree) which assesses satisfaction with life by a single-factor solution. The scores range from 5 to 25. Higher scores correspond to higher levels of satisfaction with life. In this study, the SWLS presented excellent goodness-of-fit indexes: CFI = 1.00, TLI = .99, RMSEA (90% CI) = .048 (.033 - .064) and SRMR = .017.

Rosenberg's Self-esteem Scale (RSS; Rosenberg, 1989; Brazilian version adapted by Hutz & Zanon, 2011) is a 10-item Likert-type scale (1 = totally disagree; 4 = totally agree) which assesses general self-esteem by a single-factor solution. Scores range from 10 to 40. Higher scores correspond to higher levels of general self-esteem. In the current study, fit indexes were CFI = .98, TLI = .97, RMSEA (90% CI) = .079 (.074 - .085) and SRMR = .072.

General Self-efficacy Scale (GSS, Schwarzer & Jerusalém, 1995; Brazilian version adapted by Teixeira & Dias, 2005) is a 10-item Likert-type scale (ranging from 1 = not at all true to 7 = exactly true) which assesses general self-efficacy by a single-factor solution. The scores range from 10 to 70. Higher scores correspond to higher levels of general self-efficacy. In the current study, fit indexes were CFI = .98, TLI = .97, RMSEA (90% CI) = .082 (.077 - .088) and SRMR = .060.

Procedures

The participants were invited to participate in the study through different methods. A total of 91.4% answered the questionnaires through a web-based platform, whereas the remaining 8.6% responded to the questionnaires using a paper-and-pencil format. Invitations were sent through different sources, such as personal and media invitations, recruitment

within social and occupational institutions (especially the adults and the elderly), and the snowball technique (Patton, 1990).

At the end of the survey, it was explained that this participation was the first phase of the project and that the research would continue in the following years, with data collection at intervals of one year. To obtain the consent of the participant to continue in the subsequent waves of the study, we asked for any type of information that could help us to locate him or her (e.g., home address, telephone number, e-mail address, and so forth). It was explained that this personal information would be obtained only for future contacts and that the responses to the questionnaire would be completely anonymous. Participants interested in participating in the next waves of the project provided information so that the research team could contact him or her. Those who refused to participate simply left blank the information question or made explicit their lack of interest in continuing in the study. The participants who did not agree to participate in the next waves of the study were coded as 0, and those who agreed to participate were coded as 1.

Data analysis

We aimed to evaluate the relationship of sociodemographic variables and psychological characteristics to the participants' expressed intent with regard to participating in a second wave of this study. The sociodemographic variables evaluated were age, gender, partnership (yes/no); children (presence/absence); religiosity/spirituality (yes/no); educational level; job (yes/no); job satisfaction (yes/no); financial dependency (yes/no); monthly income; and chronic disease (presence/absence). For the categorical variables (gender, religiosity, partnership, children, job, job satisfaction, financial dependency, and chronic disease), chi-square (χ^2) tests were conducted. For the ordinal variables (age, educational level, and monthly income), a MANOVA was conducted. Age was coded as years. Educational level was categorically ordered (1 – incomplete elementary school; 2 – complete elementary school; 3 – incomplete high school; 4 – complete high school; 5 – incomplete college education; 6- complete college education; 7 – incomplete graduate school; 8 – complete graduate school); monthly income was ordered according to the minimum wage scale (1 – less than or equal to the minimum wage; 2 – between one to three times the minimum wage; 3 – between three to five times the minimum wage; 4 – from five to eight times the minimum wage; 5 – more than eight times the minimum wage).

The psychological characteristics evaluated included meaning in life (presence); crisis of meaning; hope; optimism, pessimism; subjective happiness, life satisfaction, self-esteem

and self-efficacy. Two multivariate analyses of co-variance (MANCOVA; one for males and the other for females) were conducted, using all psychological characteristics (abovementioned) as dependent variables, participation (yes/no) as a factor, and chronic disease as a covariate.

The MANCOVA implemented bootstrapping (1000 resamplings) procedures, with a 99% confidence interval for the mean difference (ΔM). Bootstrapping was used to achieve greater reliability of the results, to correct for the non-normal distribution of the sample and the difference in group sizes and to present a confidence interval of 99% for the mean differences (Haukoos & Lewis, 2005).

RESULTS

Initially, we sought to examine the relationships among gender, religiosity, partnership, children, job, job satisfaction, financial dependency, and chronic disease with regard to the intent to participate in the study. The χ^2 test provided evidence of a gender effect on the intent to participate in the subsequent phases of the study. An odds-ratio (OR) evaluation showed that women were found to be 1.74 times more likely to continue in the study when compared to men. Chronic disease presented marginally significant effects on the intent to participate (See Table 1).

The omnibus MANOVA using age, educational level and monthly income as dependent variables (DVs) and the intent to participate in the study as a factor yielded significant effects (Wilk's Lambda = .99, $F[2.547, 3] = 6.54$, $p < .000$). Specific effects, however, were found only for monthly income. Participants who intended to participate in the next waves of the study were predominantly poorer. Despite the significant association, the effect size was very low (See Table 2).

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To evaluate the effects of the psychological variables on the intent to participate in the subsequent phases of the study, two MANCOVAS were conducted, one for male and the other for female participants. The MANCOVAS included all psychological variables as DVs,

chronic disease and monthly income as covariates, and intent to participate in the subsequent phases of the study as a factor.

Table 1

Chi-Square Associations among Sociodemographic Variables and Intent to Continue in Subsequent Waves of the Study

Variables		Intent in Participating		χ^2	p-value
		Yes	No		
Gender	Female	1037	570	9.2	.001
	Male	552	392	8	
Religiosity/spirituality	Yes	1.168	678	2.7	.11
	No	420	284	4	
Partnership	Yes	485	281	.49	.50
	No	1104	681		
Children	Yes	414	222	2.8	.10
	No	1175	740	4	
Job	Yes	1060	625	1.0	.58
	No	498	320		
	Retired	31	17		
Job satisfaction	Yes	833	507	1.2	.26
	No	229	121	7	
Financial dependency	Yes	761	489	2.0	.16
	No	828	473	7	
Chronic disease	Yes	266	133	3.8	.06
	No	1323	829	6	

Note: χ^2 – chi-square; p-value – exact.

Table 2

MANOVA Effects among Sociodemographic Variables and Intent to Continue in Subsequent Waves of the Study

Variables	Intent in participating		<i>F</i>	<i>n</i> ²	<i>p</i> -value
	Yes	No			
	Mean (SD)	Mean (SD)			
Age	30.81 (11.39)	29.93 (11.07)	3.61	.001	.06
Educational level	6.24 (1.37)	6.24 (1.38)	0.00	.000	.99
Monthly income	3.44 (1.27)	3.62 (1.27)	12.04	.005	.001

Note: *n*² – eta-squared (effect size measure)

As shown in Tables 3 and 4, the results were quite different for women when compared to men. Women who agreed to participate in the subsequent phases of the study presented higher indexes on all positive psychological variables, and lower levels on both pessimism and crisis of meaning (the only two “negative” measures) (See Table 3). For men, in turn, the only measure that was related significantly to the intent to participate in the subsequent phases of the study was pessimism. Those who agreed to participate presented lower levels of pessimism when compared to those who did not agree.

Table 3

MANCOVA Effects among Psychological Variables and Intent to Continue in Subsequent Waves of the Study for Women

Variables	Intent to participate		<i>F</i>	<i>p</i> -value	<i>n</i> ²
	Yes	No			
	<i>Mean (SD)</i>	<i>Mean (SD)</i>			
Pessimism	11.67 (2.19)	11.02 (2.35)	30.522	.000	.02
Optimism	6.50 (2.47)	6.96 (2.55)	15.704	.000	.01
Hope (Agency)	15.43 (2.44)	15.09 (2.28)	9.889	.002	.01
Hope (Pathway)	15.89 (2.22)	15.47 (2.39)	13.529	.000	.01
Presence of meaning	25.62 (6.31)	24.54 (6.30)	12.837	.000	.01
Crisis of meaning	5.08 (5.59)	5.80 (5.72)	9.637	.000	.01
Life satisfaction	25.09 (6.08)	24.60 (6.01)	5.823	.000	.01
Subjective Happiness	20.76 (4.82)	19.66 (5.09)	21.823	.000	.01
Self-esteem	32.66 (4.97)	31.53 (5.07)	25.730	.000	.02
Self-efficacy	31.04 (4.70)	30.02 (4.86)	19.130	.000	.01

Table 4

MANCOVA Effects among Psychological Variables and Intent to Continue in Subsequent Waves of the Study for Men

Variables	Intent to participate		<i>F</i>	<i>p</i> -value	<i>n</i> ²
	Yes	No			
	Mean (<i>SD</i>)	Mean (<i>SD</i>)			
Pessimism	6.83 (2.66)	7.25 (2.60)	6.21	.013	.01
Optimism	11.35 (2.41)	11.29 (2.24)	.32	.57	.00
Hope (Agency)	15.21 (2.47)	15.28 (2.44)	.14	.71	.00
Hope (Pathway)	16.05 (2.35)	16.01 (2.12)	.03	.85	.00
Presence of meaning	24.14 (6.73)	23.69 (6.54)	1.19	.28	.00
Crisis of meaning	5.83 (6.00)	6.18 (6.10)	.97	.32	.00
Life satisfaction	24.22 (6.07)	24.54 (5.84)	.35	.55	.00
Subjective Happiness	19.62 (5.14)	19.79 (4.87)	.10	.75	.00
Self-esteem	32.20 (5.13)	31.94 (4.99)	.76	.38	.00
Self-efficacy	31.29 (4.75)	31.18 (4.50)	.22	.64	.00

DISCUSSION

Our results showed an intriguing pattern of difference in the psychological functioning of men and women with regard to their intent to participate in the subsequent waves of a positive psychology research project. Initially, it was shown that women were almost two times more likely to participate in the next waves of the study. However, subsequent results showed that, for women, continued participation was related to their levels of well-being (in this study, measured by 10 different indicators), whereas for men, it was not.

These findings are not easy to comprehend. However, they seem to be related to gender-related motivational and emotional factors. Thus, we hypothesize several potential explanations, to clarify the obtained results.

The gender-related literature shows that human differentiation on the basis of gender is a fundamental phenomenon that affects virtually every aspect of people's daily lives (Bussey & Bandura, 1999). Studies based on personality traits have shown, for example, that women present higher levels of neuroticism (in other words, emotional instability) when compared to men (Hutz & Nunes, 2001; Oliveira, 2002; Zanon, Borsa, Bandeira, & Hutz, 2012), and this pattern is consistent across several different nations (Costa Jr., Terracciano, & McCrae, 2001; Lynn & Martin, 1997). Furthermore, it is also known that personality traits, especially neuroticism, in interaction with gender, tend to affect self-efficacy and performance in different areas of people's lives (Schmitt, 2007). Thus, we argue that men are less likely both to initiate and to continue in the subsequent phases of the study; however, those who do decide to participate and also to continue do not depend on their level of positive variables (i.e., excluding pessimism). Rather, it seems that the motivational aspects that make men decide to participate in the research are external to themselves, such as a self-transcendent interest in participating in the research. If this perspective is correct, it might explain why only the levels of pessimism were related to men's decisions with regard to participation in the subsequent waves.

Pessimism is understood as a self-regulative and relatively stable belief that negative outcomes will occur instead of positive outcomes (Carver & Scheier, 2001). Pessimistic people tend to resist action toward any object or situation if they believe the outcome related to their action will not be positive (Carver, Scheier, & Sergestrom, 2010). That is, if people believe that one event will result in a negative outcome, there will be greater resistance to initiating a behavior directed toward this event and to maintaining an active engagement (Carver & Scheier, 2001). We hypothesize that pessimistic men decide not to participate in

the subsequent waves of a study because they do not believe in the potential benefits of the scientific research they were invited to engage in.

Regarding the results presented by the women, it is possible to argue that women's decisions whether to continue in the subsequent waves of the study are more related to their cognitive and emotional characteristics. As women tend to be more emotionally unstable than men (Costa Jr., Terracciano, & McCrae, 2001), it is possible that responding to a battery of questionnaires on emotional issues (e.g., "In general, I consider myself: Not a very happy person or a very happy person") destabilizes more women than men. Thus, it is possible that women with lower levels of positive characteristics do not want to face this situation again, so they decide not to continue their participation.

Although the causal mechanisms related to these findings are not totally understood, one thing is clear: The subsequent phases of this study will include only women presenting higher levels of positive characteristics; thus, this sample will not be generalizable to the original sample, as our attrition for women is highly associated with the main variables of the study (Wolke et al., 2009). One main limitation of this study must be highlighted. Our results reflect only the intention to participate. Nothing guarantees that those who agreed to participate in the next waves of the study will do so. Consequently, future comparison among these different groups (those who said they would not like to participate; those who said they would like to participate but did not; and those who said they would like to participate and did so) would help us to better comprehend how the psychological variables measured influenced their decisions and actions toward the research.

CONCLUSION

As far as we know, this is the first study that exhaustively evaluated gender differences with regard to the intention to participate in a longitudinal positive psychology research project. It is not known to what extent these differences would appear in other areas of study or even in a similar study in different cultures. However, we believe that these results should highlight concerns related to participants' attrition in positive psychology studies.

The consequences of deriving our results from a longitudinal study using a biased sample of women can strongly affect our conclusions and threaten potential intervention plans because the evidence that such an intervention would be based on would not include data from the women who would really benefit from the intervention (i.e., those with lower scores

on the positive variables and higher scores on the negative variables). Future studies are necessary to better clarify the mechanisms presented here

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CAPÍTULO IV

CONSIDERAÇÕES FINAIS

A presente tese de doutorado teve por objetivo avaliar uma série de aspectos relacionados ao construto sentido de vida (SV) em uma ampla amostra nacional. O SV, enquanto construto psicológico, tem recebido crescente atenção nos últimos anos. Desde as publicações de Frankl, ao longo do século XX, a Psicologia não parou de investigar essa temática como um dos aspectos fundamentais para o bem-estar subjetivo e psicológico das pessoas. No Brasil, entretanto, os estudos sobre sentido de vida são bastante escassos, de modo que se faz necessário maior investimento na área.

O primeiro estudo desta tese refere-se a uma sucinta revisão não sistemática da literatura acerca dos principais instrumentos já desenvolvidos para avaliação do construto SV e correlatos (busca por sentido, fontes de sentido, crise existencial). Neste estudo, foram apresentadas algumas características de 12 diferentes instrumentos. Conforme discutido, os primeiros instrumentos apresentavam uma série de problemas de conceituação, que foram sendo suprimidos com o passar dos anos. Atualmente, diferentes instrumentos apresentam ótimas propriedades psicométricas, sendo considerados como adequados para avaliação do construto.

Dois destes instrumentos foram validados para o contexto brasileiro neste estudo. O primeiro, intitulado Questionário de Sentido de Vida (QSV), refere-se a um instrumento de 10 dez itens que avaliam dois diferentes construtos “presença de sentido” e “busca por sentido”. A estrutura fatorial do instrumento foi bastante clara. Índices de confiabilidade e de adequação de ajuste, também, foram adequados. Análises fatoriais confirmatórias multigrupo (AFCMG) demonstraram que o QSV não apresentou vieses em nenhum dos parâmetros estudados nem para grupos de idade (jovens, adultos e idosos) nem para sexo. Este conjunto de resultados demonstra que o QSV aparenta ser um instrumento fortemente confiável para uso na população brasileira.

O segundo instrumento validado, Questionário de Fontes de Sentido e de Sentido de Vida (SoMe-Br), é um instrumento bastante amplo. Avalia 26 fontes de sentido, além de mensurar dois outros construtos: sentido de vida (similar à presença de sentido, mensurado pelo MLQ) e crise de sentido. O SoMe-BR apresentou adequadas propriedades psicométricas. A estrutura fatorial das 26 fontes de sentido foi bastante semelhante à estrutura original, apresentando apenas pequenas variações. Os índices de adequação de ajuste dessa estrutura

foram marginais, sugerindo aceitabilidade, porém, informando que futuros refinamentos podem aprimorar a sua estrutura. Posteriormente, estão previstos futuros estudos, com novas amostras, com o objetivo de refinar o SoMe-Br. Espera-se poder reduzir o número de itens do instrumento (151) com o objetivo de mensurar todas as características avaliadas pelo instrumento original, porém de maneira mais parcimoniosa e ainda com mais confiabilidade. Os resultados deste estudo também corroboraram a literatura, a qual sugere que os construtos sentido de vida e crise de sentido são mais bem mensurados enquanto dois construtos distintos, embora relacionados. Essa perspectiva teórica proposta apenas recentemente por Schnell & Becker (2007) modificou amplamente a concepção até então existente sobre o construto sentido de vida, e ampliou significativamente a compreensão sobre diferentes possíveis categorias de sentido. Neste estudo foi possível corroborar muito dos achados propostos por Schnell (2010) e, além disso, novos conhecimentos foram desenvolvidos.

O terceiro estudo visou a apresentar evidências de validade da Escala de Felicidade Subjetiva (EFS). Este estudo foi escrito com uma proposta de relato breve de pesquisa, com uma amostra de 600 sujeitos, escolhidos aleatoriamente do banco completo. A estrutura fatorial e os índices de adequação de ajuste da escala foram excelentes, de modo que a escala mostrou-se bastante confiável para uso. É importante salientar que a EFS é uma escala que apresenta um potencial bastante significativo para as pesquisas sobre felicidade. Isto porque, a EFS avalia a felicidade a partir da perspectiva do próprio sujeito. Assim, os pesquisadores podem avaliar esse construto de maneira bastante objetiva. É importante salientar que, muito do conhecimento científico desenvolvido acerca da temática “felicidade” foi desenvolvido mensurando a felicidade como preponderância de afetos positivos sobre afetos negativos, uma proposta desenvolvida por Diener em 1984, utilizada como padrão em anos seguintes, e posteriormente refutada por um número de pesquisadores. Devido a isto, a EFS ganhou notoriedade internacional muito rapidamente, e sua adequada validação para o contexto brasileiro tem potencial para ser um benefício significativo, visto a sua adequada elaboração teórica, excelentes propriedades psicométricas e brevidade.

Para além dos estudos de validação, esta tese apresentou, ainda, três estudos empíricos. O estudo intitulado “Complex experiences of meaning in life: Individual differences among sociodemographic variables, sources of meaning and psychological functioning” avaliou os perfis sociodemográficos e psicológicos de sujeitos inseridos em diferentes categorias de sentido (mensurados por meio da interação entre os construtos sentido de vida e crise existencial). Este estudo é importante, pois é o primeiro a replicar os achados de Tatjana Schnell, além de ampliar o conhecimento na área por duas perspectivas: 1)

apresenta a existência de uma nova categoria de sentido (conflito existencial), anteriormente não encontrada nos estudos da Tatjana Schnell, realizado com amostra representativa da população austríaca; e 2) investiga o perfil psicológico dos sujeitos inseridos nestas categorias utilizando uma série de construtos relacionados que anteriormente não utilizados.

O próximo capítulo da tese, intitulado “How search for meaning interacts with complex categories of meaning in life and subjective well-being?” visou a continuar com o conhecimento desenvolvido e apresentado no estudo anterior. Neste estudo, foi investigado como os níveis de busca por sentido podem moderar as relações entre as diferentes categorias de sentido com os indicadores de bem-estar subjetivo (felicidade subjetiva e satisfação com a vida). Este estudo trouxe uma série de resultados. Inicialmente, foi demonstrado que os níveis de crise existencial se correlacionam positivamente com busca por sentido (associação até então não investigada na literatura). Essa relação é inquietante, e levantou uma série de questionamentos. Futuros estudos, de caráter longitudinal, são imprescindíveis para compreender até que ponto a busca por sentido serve como uma alternativa para construção de sentido, ou para aumento de crise existencial.

Neste estudo, também foi demonstrado que os níveis de busca por sentido moderaram as relações entre as categorias de sentido para a variável felicidade subjetiva, mas não para satisfação com a vida. Estes resultados foram discutidos com base nos conhecimentos já existentes. Novas hipóteses foram ponderadas, e uma série de questionamentos para estudos futuros foram levantados.

Por fim, o último estudo, intitulado “Attrition rates in a Brazilian longitudinal survey focused on positive psychological characteristics: theoretical, empirical and methodological considerations” teve por objetivo avaliar como diferentes características biossociodemográficas e psicológicas influenciavam o interesse na participação de homens e mulheres frente a futuras etapas desta pesquisa. Foi visto que, das variáveis biossociodemográficas, apenas a renda, o sexo e ser ou não portador de alguma doença crônica estava relacionado com a decisão de participar ou não das futuras etapas da pesquisa. Porém, destas, o sexo foi a variável que teve maior influência. Assim, optou-se por verificar como as diferentes variáveis psicológicas positivas influenciam homens e mulheres no interesse ou não de continuar contribuindo com a pesquisa. Foi observado um padrão bastante diferenciado entre homens e mulheres. Para as mulheres, todas as variáveis psicológicas analisadas influenciaram na decisão de participar ou não das etapas subsequentes do estudo, de modo que, as que optaram por participar apresentaram maior escore em todas as variáveis “positivas”, e menor escore em todas as variáveis “negativas”. Para os homens, porém, apenas

o pessimismo influenciou na decisão de participar. Aqueles que decidiram participar da pesquisa eram, em geral, menos pessimistas quando comparados com os que não desejaram participar. Os resultados deste estudo fornecem evidências de que os homens e mulheres da amostra tiveram uma postura diferenciada frente à pesquisa. Discussões em termos teóricos, empíricos e metodológicos foram geradas, com o objetivo de refletir sobre as implicações destes resultados nos desfechos obtidos em pesquisas longitudinais na área da Psicologia Positiva. É importante salientar, porém que, por ser um estudo novo na área, sem precedentes passíveis de comparação, os achados aqui encontrados merecem replicação.

As contribuições deixadas ao final deste trabalho apontam para a necessidade de novas investigações com o objetivo de dar continuidade ao desenvolvimento do conhecimento acerca do construto sentido de vida e suas repercussões em diversas áreas da vida do sujeito. Uma vez que o campo da Psicologia Positiva está em significativa ascensão, este estudo vem a contribuir com a área, com o objetivo de potencializar o seu desenvolvimento.

ANEXOS

ANEXO A

PARECER DO COMITÊ DE ÉTICA



U F R G S
UNIVERSIDADE FEDERAL
DO RIO GRANDE DO SUL

PRÓ-REITORIA DE PESQUISA

Comitê De Ética Em Pesquisa Do Instituto De Psicologia



CARTA DE APROVAÇÃO

Comitê De Ética Em Pesquisa Do Instituto De Psicologia analisou o projeto:

Número: 22239

Título: Sentido de Vida e Bem-Estar Subjetivo: Interações com Esperança, Otimismo, Autoeficácia e Autoestima em Diferentes Etapas do Ciclo Vital

Pesquisadores:

Equipe UFRGS:

SILVIA HELENA KOLLER - coordenador desde 15/03/2012
Bruno Figueiredo Damasio - pesquisador desde 15/03/2012
LUANA DULLIUS - pesquisador desde 15/03/2012

Comitê De Ética Em Pesquisa Do Instituto De Psicologia aprovou o mesmo por estar adequado ética e metodologicamente e de acordo com a Resolução 196/96 e complementares do Conselho Nacional de Saúde.

Eventos adversos e eventuais ementas ou modificações no protocolo de pesquisa devem ser comunicadas a este Comitê. Devem também ser apresentados anualmente relatórios ao Comitê, inicialmente em 04/06/2013, bem como ao término do estudo.

Porto Alegre, Terça-Feira, 12 de Junho de 2012

JUSSARA MARIA ROSA MENDES
Coordenador da comissão de ética

ANEXO B

QUESTIONÁRIO BIOSOCIODEMOGRÁFICO

- 1) Cidade: _____ 2) Estado: _____
- 3) Sexo: () Feminino () Masculino
- 4) Idade: _____ anos
- 5) Você mora em zona urbana ou rural? () Urbana () Rural
- 6) Estado Civil:
() Solteiro () Casado () Viúvo () Separado () Outro, qual: _____
- 7) Você tem filhos? () Sim () Não
- 7.1) Se sim, quantos? _____
- 8) Religião () Sim () Não
- 8.1) Se sim, qual (Marque uma ou mais opções):
() Católica () Evangélica () Espírita () Umbanda () Candomblé () Judaica
() Outra, qual? _____
- 8.2) Qual o grau de importância da sua crença espiritual ou religiosa em sua vida?
1.() Muito pouco 2.() Pouco 3.() Mais ou menos 4.() Bastante 5.() Muito
- 9) Qual o seu grau de escolaridade?
- () Ensino Fundamental Incompleto () Ensino Fundamental Completo
() Ensino Médio Incompleto () Ensino Médio Completo
() Ensino Superior Incompleto () Ensino Superior Completo
() Pós-Graduação Incompleta () Pós-Graduação Completa
- 10) Você Trabalha? () Sim () Não
- 10.1) Se sim, qual a sua profissão? _____
- 10.2) Se sim, é satisfeito com o seu trabalho? () Sim () Não
- 10.2.1) Por quê? _____
- 11) Você depende financeiramente de alguém? () Sim () Não
- 12) Qual é a sua renda mensal?
- () Até um salário mínimo (aproximadamente R\$ 620,00);
() De um a três salários mínimos (Entre R\$ 620,00 e R\$ 1.860,00);
() De três a cinco salários mínimos (Entre 1.860,00 e 3.100,00);

De cinco a oito salários mínimos (Entre 3.100,00 e R\$ 4.960,00);

Mais de oito salários mínimos (Mais de R\$ 4.960)

13) Você tem algum problema de saúde crônico? Sim Não

13.1) Se sim, qual? _____

14) Você é portador de alguma necessidade especial? Sim Não

14.1) Se sim, qual? _____

15) No último ano você foi hospitalizado alguma vez por motivo de doença?

Sim Não

15.1) Se sim, qual? _____

15.2) Quantos dias esteve hospitalizado? ____ dias

15) Existe alguma informação relevante, ou algo que possa ter interferido nas suas respostas que você ache importante acrescentar?

ANEXO C

QUESTIONÁRIO DE SENTIDO DE VIDA (QSV)

Tire um momento para pensar sobre os elementos que fazem sua vida parecer importante para você. Responda às afirmações abaixo da forma mais sincera e precisa que puder. Lembre-se que são questões muito pessoais e que não existem respostas certas ou erradas. Responda de acordo com a escala abaixo:

Totalmente falsa	Geralmente falsa	Um pouco falsa	Nem falsa, nem verdadeira	Um pouco verdadeira	Geralmente verdadeira	Totalmente verdadeira
1	2	3	4	5	6	7

1. ____ Eu entendo o sentido da minha vida.
2. ____ Estou procurando por algo que faça a minha vida ser significativa.
3. ____ Eu estou sempre procurando encontrar o propósito da minha vida.
4. ____ Minha vida tem um propósito claro.
5. ____ Eu tenho uma clara noção do que faz a minha vida ser significativa.
6. ____ Eu encontrei um propósito de vida satisfatório.
7. ____ Eu estou sempre procurando por algo que faça com que a minha vida seja significativa.
8. ____ Eu estou buscando um propósito ou uma missão para a minha vida.
9. ____ Minha vida não tem um propósito claro.
10. ____ Estou buscando sentido na minha vida.

Sintaxe do QSV-BR para criação das escalas “Presença de sentido” e “Busca por sentido”:

Presença de sentido: Itens 1, 4, 5, 6, & 9-invertido.

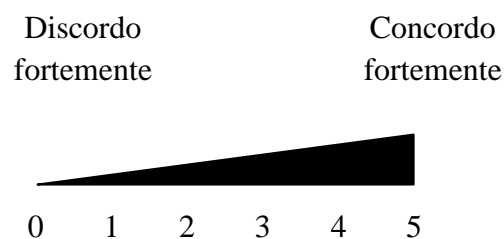
Busca por sentido: Itens 2, 3, 7, 8, & 10.

ANEXO D

QUESTIONÁRIO DE FONTES DE SENTIDO E SENTIDO DE VIDA (SOME-BR)

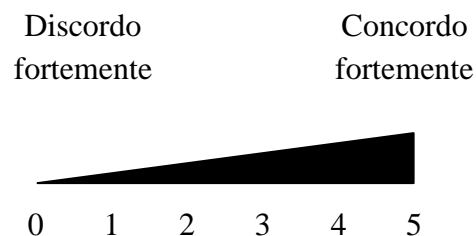
Este questionário lida com diversos aspectos da sua vida. Algumas perguntas não poderão ser respondidas imediatamente. Elas são sobre assuntos os quais você não fala ou pensa todos os dias. Assim, você pode tomar o tempo que for preciso para respondê-las. Por favor, seja o mais sincero(a) possível nas respostas. Não existem respostas certas ou erradas. É apenas a sua opinião que conta. Para indicar o seu grau de concordância ou discordância, utilize a escala abaixo.

Exemplo:



000. Frase

Por favor, não deixe em branco nenhuma questão. Se você não conseguir responder facilmente uma questão, marque a opção que mais se aproxima do que você pensa. Caso você tenha mudado de opinião, após ter marcado uma das opções, marque outra opção, e circule a opção correta. Exemplo:



000. Frase

Discordo
fortemente

Concordo
fortemente



1. Eu levo uma vida plena	0	1	2	3	4	5
2. Eu sofro por não encontrar um propósito na minha vida	0	1	2	3	4	5
3. Eu intervenho quando vejo alguma injustiça sendo feita	0	1	2	3	4	5
4. A religião tem um papel importante na minha vida	0	1	2	3	4	5
5. Eu me sinto muito próximo à natureza e ao ar livre	0	1	2	3	4	5
6. Entender-me e entender os meus comportamentos é importante para mim	0	1	2	3	4	5
7. Eu presto bastante atenção à minha saúde	0	1	2	3	4	5
8. Você deve deixar algo para as gerações futuras	0	1	2	3	4	5
9. O destino de todas as pessoas é predeterminado	0	1	2	3	4	5
10. Eu preciso de um pouco de risco e de emoção na minha vida	0	1	2	3	4	5
11. O objetivo mais importante na minha vida é a minha realização pessoal	0	1	2	3	4	5
12. Eu enfrento os desafios que a vida me apresenta	0	1	2	3	4	5
13. A vida para mim significa lutar por melhorias e desenvolvimento contínuo	0	1	2	3	4	5
14. O sucesso é o que importa para mim	0	1	2	3	4	5
15. Eu quero ser livre e independente	0	1	2	3	4	5
16. Eu tenho uma grande sede de conhecimento	0	1	2	3	4	5
17. O pintor Picasso estava certo ao dizer que as coisas mais importantes da vida são ser criativo e imaginativo	0	1	2	3	4	5
18. Levar uma vida organizada é importante	0	1	2	3	4	5
19. Eu preciso ver resultados claros ao final de um dia de trabalho	0	1	2	3	4	5
20. Boas maneiras são importantes para mim	0	1	2	3	4	5
21. Os problemas só podem ser resolvidos racionalmente	0	1	2	3	4	5
22. Devemos passar nossas vidas na companhia de outras	0	1	2	3	4	5

23. Divertir-se é a coisa mais importante na vida	0	1	2	3	4	5
24. Eu invisto muito tempo em questões amorosas e românticas	0	1	2	3	4	5
25. As pessoas deveriam mimar-se regularmente	0	1	2	3	4	5
26. Eu sou uma pessoa que se importa com os outros	0	1	2	3	4	5
27. As mudanças de uma fase da vida para a outra devem ser celebradas	0	1	2	3	4	5
28. O sentimento de harmonia é muito importante na minha vida	0	1	2	3	4	5
29. Eu acho que há sentido nas coisas que eu faço	0	1	2	3	4	5
30. Minha vida parece vazia	0	1	2	3	4	5
31. Eu me empenho em ver a justiça sendo feita	0	1	2	3	4	5
32. Orar/Rezar é importante para mim	0	1	2	3	4	5
33. Meu objetivo é viver em harmonia com a natureza	0	1	2	3	4	5
34. Ser crítico comigo mesmo é importante para mim	0	1	2	3	4	5
35. Eu tenho um estilo de vida que faz bem à minha saúde	0	1	2	3	4	5
36. Eu me esforço para fazer algo para as gerações futuras	0	1	2	3	4	5
37. Há certas coisas na vida que eu considero sagradas	0	1	2	3	4	5
38. As pessoas deveriam experimentar de tudo pelo menos uma vez	0	1	2	3	4	5
39. A independência é muito importante para mim	0	1	2	3	4	5
40. Eu sou um(a) lutador(a)	0	1	2	3	4	5
41. Eu me esforço para realizar meus objetivos	0	1	2	3	4	5
42. Eu admiro pessoas que são bem sucedidas	0	1	2	3	4	5
43. Independência significa muito para mim	0	1	2	3	4	5
44. Eu gosto de questionar tudo	0	1	2	3	4	5
45. Eu gosto de ser criativo	0	1	2	3	4	5
46. Eu gosto que minha vida siga certa rotina	0	1	2	3	4	5
47. Ao invés de ficarem filosofando, as pessoas deveriam enfrentar a vida	0	1	2	3	4	5
48. Eu tenho conceitos morais claros.	0	1	2	3	4	5
49. A razão é a medida de todas as coisas	0	1	2	3	4	5
50. Eu me esforço para cultivar meus relacionamentos	0	1	2	3	4	5
51. Um bom senso de humor torna a vida mais fácil	0	1	2	3	4	5

52. Eu amo me envolver em sentimentos românticos	0	1	2	3	4	5
53. Eu tiro um tempo para relaxar	0	1	2	3	4	5
54. O bem-estar dos outros é muito importante para mim	0	1	2	3	4	5
55. Quando uma criança nasce, quando alguém casa, ou quando uma pessoa morre, é importante cumprir certos rituais	0	1	2	3	4	5
56. Criar um clima positivo é muito importante para mim quando eu estou junto com outras pessoas	0	1	2	3	4	5
57. Eu tenho um objetivo na vida	0	1	2	3	4	5
58. Minha vida parece sem sentido	0	1	2	3	4	5
59. Construir uma sociedade justa é mais importante para mim do que ganhos financeiros	0	1	2	3	4	5
60. Minha religião me dá força	0	1	2	3	4	5
61. Faço a minha parte para proteger o meio-ambiente	0	1	2	3	4	5
62. Mesmo sabendo que é necessário muito esforço, eu estou sempre à procura de autoconhecimento	0	1	2	3	4	5
63. Eu acho que uma dieta saudável é de grande importância	0	1	2	3	4	5
64. Eu quero fazer alguma diferença para o futuro	0	1	2	3	4	5
65. Eu acredito em milagres	0	1	2	3	4	5
66. Eu posso ficar imediatamente entusiasmado com novas ideias	0	1	2	3	4	5
67. Limites existem para serem rompidos	0	1	2	3	4	5
68. Eu preferiria liderar um grupo a ser apenas um de seus membros	0	1	2	3	4	5
69. Eu estou sempre à procura de tarefas que me ensinarão alguma coisa	0	1	2	3	4	5
70. Eu preciso produzir excelentes resultados	0	1	2	3	4	5
71. Eu sou uma pessoa que ama a liberdade	0	1	2	3	4	5
72. No meu tempo livre, gosto de aprofundar meu conhecimento sobre coisas que me interessam.	0	1	2	3	4	5
73. Eu vivo a minha vida com imaginação e criatividade	0	1	2	3	4	5
74. As pessoas não deveriam questionar tradições já estabelecidas	0	1	2	3	4	5
75. Viver a vida com os dois pés bem firmes no chão é muito	0	1	2	3	4	5

importante para mim						
76. Todo mundo precisa de valores claros nos quais se apoiar.	0	1	2	3	4	5
77. Eu não tomo decisões precipitadamente, por isso levo um tempo para pensá-las bem						
78. Eu preciso estar perto de outras pessoas	0	1	2	3	4	5
79. As pessoas com as quais eu passo muito tempo devem ser alegres	0	1	2	3	4	5
80. Eu faço um grande esforço para ficar íntimo de uma pessoa de quem eu me sinto próximo	0	1	2	3	4	5
81. Se eu quero alguma coisa, eu me dou o direito de aproveitá-la.	0	1	2	3	4	5
82. Estou sempre pensando em como posso fazer outras pessoas felizes	0	1	2	3	4	5
83. Eu quero experimentar cada momento da minha vida ao máximo	0	1	2	3	4	5
84. Quando estou lidando com outras pessoas, a harmonia é muito importante para mim	0	1	2	3	4	5
85. Eu sinto que faço parte de algo maior do que eu mesmo	0	1	2	3	4	5
86. Quando penso sobre o sentido da minha vida, encontro somente o vazio	0	1	2	3	4	5
87. Eu concordo com os preços mais altos da gasolina pelo bem do meio ambiente	0	1	2	3	4	5
88. Eu me esforço para ter um dia equilibrado e harmonioso	0	1	2	3	4	5
89. Sinto-me são e salvo na natureza e ao ar livre	0	1	2	3	4	5
90. Para mim é muito importante praticar a autorreflexão	0	1	2	3	4	5
91. Se divertir é mais importante do que ser saudável	0	1	2	3	4	5
92. Eu tento fazer ou criar coisas que tenham valor duradouro	0	1	2	3	4	5
93. Há uma razão para que as coisas aconteçam da forma como elas acontecem	0	1	2	3	4	5
94. Eu procuro por desafios	0	1	2	3	4	5
95. Eu quero ser diferente das outras pessoas	0	1	2	3	4	5
96. Eu gosto de ser capaz de influenciar outras pessoas	0	1	2	3	4	5
97. A aprendizagem ao longo da vida é muito importante para	0	1	2	3	4	5

mim						
98. Eu sou uma pessoa focada em conquistas	0	1	2	3	4	5
99. Eu tenho uma forte necessidade de liberdade	0	1	2	3	4	5
100. Eu quero ser capaz de entender tudo que cruza o meu caminho	0	1	2	3	4	5
101. A criatividade tem um papel muito importante na minha vida	0	1	2	3	4	5
102. As escolas devem apresentar e ensinar valores, e não questioná-los	0	1	2	3	4	5
103. Eu sou mais de agir do que de pensar	0	1	2	3	4	5
104. Eu preciso sentir segurança em minha vida	0	1	2	3	4	5
105. Eu avalio os prós e os contras antes de tomar uma decisão	0	1	2	3	4	5
106. Eu passo o maior tempo possível na companhia de outras pessoas	0	1	2	3	4	5
107. Eu me sinto mais atraído (a) por pessoas alegres do que por pessoas sérias	0	1	2	3	4	5
108. Na minha vida, tudo gira em torno do amor	0	1	2	3	4	5
109. Independente do que eu faça, o mais importante é que eu me sinta bem fazendo isto	0	1	2	3	4	5
110. Se alguém me pede ajuda, estou sempre à disposição	0	1	2	3	4	5
111. No ano novo, eu sempre reservo um tempo para refletir sobre a vida	0	1	2	3	4	5
112. Eu estou me esforçando por harmonia interior	0	1	2	3	4	5
113. Eu acho que a minha vida tem um sentido mais profundo	0	1	2	3	4	5
114. Eu não vejo nenhum sentido na vida	0	1	2	3	4	5
115. Eu estaria disposto (a) a sofrer perdas financeiras pelo bem do meio ambiente	0	1	2	3	4	5
116. Eu me esforço para ter paz e equilíbrio interior	0	1	2	3	4	5
117. Eu só me sinto realmente vivo quando estou ao ar livre, em contato com a natureza	0	1	2	3	4	5
118. Eu penso sobre quem eu sou com frequência	0	1	2	3	4	5
119. Eu faço algumas coisas com regularidade porque elas fazem-me sentir bem	0	1	2	3	4	5

<i>120.</i> Eu tento fazer do mundo um lugar melhor para se viver	0	1	2	3	4	5
<i>121.</i> Tenho a sensação de que existe uma realidade diferente da que conhecemos	0	1	2	3	4	5
<i>122.</i> Eu sou uma pessoa que gosta de correr riscos	0	1	2	3	4	5
<i>123.</i> O meu objetivo na vida é descobrir e viver as minhas habilidades e os meus interesses	0	1	2	3	4	5
<i>124.</i> Quando tenho oportunidade, eu mostro as minhas habilidades	0	1	2	3	4	5
<i>125.</i> Eu estou sempre lutando para mudar e melhorar a mim mesmo	0	1	2	3	4	5
<i>126.</i> Existem coisas que eu faço com frequência com outras pessoas que tem um significado especial para mim	0	1	2	3	4	5
<i>127.</i> Eu sou movido por um desejo de liberdade	0	1	2	3	4	5
<i>128.</i> Eu leio muito	0	1	2	3	4	5
<i>129.</i> Em meu tempo livre, me ocupo com atividades criativas	0	1	2	3	4	5
<i>130.</i> Ao invés de buscar por coisas novas, eu prefiro as coisas já estabelecidas	0	1	2	3	4	5
<i>131.</i> As pessoas devem ser sempre realistas	0	1	2	3	4	5
<i>132.</i> Os pais deveriam retomar o ensino da moral aos seus filhos	0	1	2	3	4	5
<i>133.</i> Eu me descreveria como uma pessoa sensata	0	1	2	3	4	5
<i>134.</i> As amizades estão entre as coisas mais importantes da minha vida	0	1	2	3	4	5
<i>135.</i> É importante para mim dar gargalhadas pelo menos uma vez ao dia	0	1	2	3	4	5
<i>136.</i> As pessoas devem se concentrar nas coisas úteis e necessárias na vida	0	1	2	3	4	5
<i>137.</i> Eu reservo tempo suficiente para relaxar	0	1	2	3	4	5
<i>138.</i> Eu prefiro aprender coisas que são práticas ao invés de teóricas	0	1	2	3	4	5
<i>139.</i> Eu acho importante experienciar a mudança das estações e celebrá-las	0	1	2	3	4	5
<i>140.</i> É muito importante para mim, viver em harmonia comigo	0	1	2	3	4	5

e com os outros						
<i>141.</i> Ações falam mais alto do que palavras	0	1	2	3	4	5
<i>142.</i> Algumas coisas são tão importantes para mim que eu as comemoro regularmente	0	1	2	3	4	5
<i>143.</i> Eu presto muita atenção ao meu equilíbrio interno	0	1	2	3	4	5
<i>144.</i> Eu, intencionalmente, reservo um tempo para pensar em mim mesmo	0	1	2	3	4	5
<i>145.</i> Todas as pessoas têm uma missão para cumprir na vida	0	1	2	3	4	5
<i>146.</i> Traçar meu próprio caminho na vida é crucial para mim	0	1	2	3	4	5
<i>147.</i> A vida deve significar desenvolvimento e mudança	0	1	2	3	4	5
<i>148.</i> A liberdade é a coisa mais importante para mim	0	1	2	3	4	5
<i>149.</i> Eu gosto de me manter firme às tradições	0	1	2	3	4	5
<i>150.</i> Eu gosto de sair	0	1	2	3	4	5
<i>151.</i> Às vezes eu gosto de mimar a mim mesmo, e não cuidar tanto das minhas finanças quanto de costume	0	1	2	3	4	5

ANEXO E

ESCALA DE FELICIDADE SUBJETIVA (EFS)

Instruções: Para cada uma das seguintes afirmações ou perguntas faça, por favor, um círculo em torno do número da escala que você pensa ser o mais apropriado para descrevê-lo. Você pode escolher qualquer número de 1 a 7.

1. Em geral, eu me considero:

1	2	3	4	5	6	7
Uma pessoa não muito feliz			Nem infeliz, nem feliz			Uma pessoa muito feliz

2. Comparado à maioria dos meus colegas/amigos, eu me considero:

1	2	3	4	5	6	7
Menos feliz			Nem menos feliz, nem mais feliz			Mais feliz

3. Algumas pessoas, de maneira geral, são muito felizes. Elas aproveitam a vida independentemente do que esteja acontecendo, conseguindo o máximo de cada situação. Em que medida essa caracterização descreve você?

1	2	3	4	5	6	7
Nem um pouco			Nem pouco, nem muito			Muito

4. Algumas pessoas, de maneira geral, **não são muito felizes**. Embora não estejam deprimidas, elas nunca parecem tão felizes quanto poderiam ser. Em que medida essa caracterização descreve você?

1	2	3	4	5	6	7
Nem um pouco			Nem pouco, nem muito			Muito