

Meaning in Life and Wellbeing

Michael F. Steger

Much of the effort expended in the medical and social sciences seems to follow an implicit notion that all people desire is a life free from pain, suffering and distress. Our collective effort has identified unending legions of threats, from viruses and bacteria to personal depression and global recession. Without diminishing the importance of identifying and attempting to ameliorate such threats, the past few decades have seen an unprecedented eruption of research that looks less at what people might want to avoid and more at what they might truly desire in life. Perhaps people want not only an absence of sickness but also their share of health. Perhaps people desire not only relief from the sinking pull of psychological suffering but also the buoyancy of psychological wellbeing. And perhaps people not only want to avoid the annihilation of existential emptiness but also strive for lives rich in meaning and purpose. This chapter wholeheartedly embraces these ideas and provides a brief overview of what we know about how finding and pursuing meaning in life may help ameliorate suffering and promote wellbeing.

What Is Meaning in Life?

The title of this chapter is “Meaning in Life and Wellbeing.” We shall see that “meaning” is really the umbrella term that spans key concepts, such as “significance” and “purpose.” There is the greatest consensus around defining meaning in life as “the extent to which people comprehend, make sense of, or see significance in their lives, accompanied by the degree to which they perceive themselves to have a purpose, mission, or overarching aim in life” (Steger, 2009, p. 682). What this definition really expresses is that the way that social scientists study meaning in life focuses on people’s ability to comprehend or understand their life experiences and feel the drive and motivation of some grand, overarching life purpose or mission (or purposes and missions). Most of the past 60 years of research have used a definition of meaning in life that fits well with the one presented here, embracing a cognitive component (making sense of life) and a motivational component (pursuing purpose). More recently, a handful of scholars have made an effort to flesh out a third component of meaning that often seemed implicit in earlier definitions. These new efforts hinge somewhat on the multiple meanings of the word “significance.” Significance can be used to refer to the interpretative and communicative qualities of something, as in the way that signs and signals are meant to communicate interpretable information (Steger et al., 2006). This would represent the cognitive component that long has been included in defining meaning in life. Significance also can be used to refer to the value or importance of something, as in the way

Wellbeing, Recovery and Mental Health, ed. Mike Slade, Lindsay Oades and Aaron Jarden.

Published by Cambridge University Press. © Mike Slade, Lindsay Oades and Aaron Jarden 2017

that having a baby can be a significant life event (Martela and Steger, 2015). George and Park (2013) call this component “mattering” and use it to suggest that one’s life must be seen to have some value and worthwhileness for it to be meaningful. In other words, a meaningful life must be seen to matter. This new line of inquiry would seek to establish an evaluative component of meaning to join the cognitive and motivational ones (Heintzelman and King, 2014b). As Steger (2012) put it three years after his previous definition, “meaning in life necessarily involves people feeling that their lives matter, making sense of their lives, and determining a broader purpose for their lives” (p. 177). Thus, meaning in life captures the human capacity to make sense of life, to pursue purpose and to lead a life that is worthwhile and important.

What Is the Connection between Meaning in Life and Wellbeing?

Especially when contrasted with feeling that life is pointless, confusing, and worthless, it sounds pretty good to instead be able to find meaning in one’s life. It should not be a surprise, then, that hundreds of scientific studies have firmly linked meaning in life to lesser suffering and greater wellbeing, both psychologically and physically (Steger, 2012). On top of that, research has begun to show that people who report greater meaning in life are better relationship partners, neighbors, and citizens. In fact, several of the most prominent theories of wellbeing and human flourishing consider meaning in life to be a fundamental cornerstone of happiness and the best life people can attain (e.g. Diener and Seligman, 2004; Ryan and Deci, 2001; Ryff and Singer, 1998). In this section, I review research connecting meaning in life with psychological, physical and social wellbeing.

Meaning in life is associated with more frequent and intense experiences of positive emotions and vitality (Chamberlain and Zika, 1988; Kennedy et al., 1994; Keyes et al., 2002; King et al., 2006; Ryff, 1989; Steger et al., 2006; Steger et al., 2008c; Steger et al., 2015a; Zika and Chamberlain, 1992). Feeling better makes enjoying life easier, and meaning is related to a wide range of broad indicators of happiness and positive adjustment in life in many countries around the world (Bonebright et al., 2000; Debats, 1996; Debats et al., 1993; Fry, 2000, 2001; Garfield, 1973; O’Conner and Vallerand, 1998; Reker, 2002; Reker et al., 1987; Ryff and Keyes, 1995; Scannell et al., 2002; Shek, 1995; Shin et al., 2005; Steger et al., 2008b; Steger et al., 2008d; Thompson et al., 2003; Wong, 1998; Zika and Chamberlain, 1987; Zika and Chamberlain, 1992). In the end, people who feel like their lives are more meaningful also are more satisfied with their lives (Chamberlain and Zika, 1988; Keyes et al., 2002; Ryff, 1989; Steger, 2006; Steger and Frazier, 2005; Steger et al., 2006; Steger and Kashdan, 2006; Steger et al., 2008b).

On a more personal level, those who find their lives to be meaningful express more positive feelings and opinions about themselves, too. They score higher on measures of self-esteem, self-acceptance, and positive self-image (Debats, 1996; Garfield, 1973; Phillips et al., 1974; Ryff, 1989; Shek, 1992; Steger et al., 2008c). These results are not just for lucky people who have grown up in a world of self-congratulation and positive feedback; the link between meaning in life and more positive self-worth appears among people who are living quite outside the mainstream, either by choice as in novice Dominican nuns (Crumbaugh et al., 1970), by necessity as in nursing home residents (O’Conner and Vallerand, 1998) or by adjudication as in prisoners (Reker, 1977).

Although it is wonderful and desirable to feel good about one’s life and one’s self, meaning does not appear to be just fairy dust, helping people prop up phony smiles and inflated perceptions of self-importance. Instead, meaning also is related to psychological maturity and

development, including greater self-actualization, personal growth, ego strength, self-control and responsibility (Ebersole and Quiring, 1991; Furrow et al., 2004; Garfield, 1973; Phillips, 1980; Reker, 1977; Reker and Peacock, 1981; Ryff, 1989; Shek, 1992; Tryon and Radzin, 1972). This psychological maturity may fuel a greater willingness to take charge in one's life. Research shows that meaning is positively related to having an internal locus of control and negatively related to having an external or chance locus of control (Newcomb and Harlow, 1986; Ryff, 1989; Thompson et al., 2003). With this in mind, it is no wonder that people high in meaning report a greater degree of autonomy, ambition and mastery in their lives (Debats et al., 1993; Reid, 1996; Ryff, 1989; Shek, 2001; Steger et al., 2008). There is no evidence, however, that meaning fuels an adversarial or domineering approach to life. Rather, meaning is linked to a positive perception of and approach to the world as well as an optimistic orientation toward the future (Acuff and Allen, 1970; Reker, 1977; Reker and Peacock, 1981; Sharpe and Viney, 1973; Simon et al., 1998; Steger et al., 2008). A meaningful life is a life of hope, optimism, and striving for a better future (Mascaro and Rosen, 2005; Mascaro and Rosen, 2006; Mascaro et al., 2004; Steger, 2006; Steger and Frazier, 2005; Thompson and Pitts, 1993). It may be that successfully overcoming difficulty in the past makes it easier to foresee and pursue a positive future. Indeed, people high in meaning report more effective coping skills and better adjustment following trauma (Debats et al., 1995; Edwards and Holden, 2001; Jim et al., 2006; Steger et al., 2008a; Stevens et al., 1987).

The mind-body connection has been an increasingly influential idea in the science and practice of human health. Due to the extensive and well-documented associations that meaning in life demonstrates with psychological health, we should expect a similar trend for physical health. Indeed, as one recent review determined, there are dozens of studies showing that people who feel their lives are meaningful enjoy better physical health (Roepke et al., 2014). This relationship takes many different forms, including subjective measures of how people rate their own health. Using this approach, research has found positive relations between meaning in life and better subjective health among cancer patients (Brady et al., 1999), cancer survivors (Jim and Anderson, 2007), Alzheimer's disease patients (Boyle et al., 2012) and smoking cessation patients (Steger et al., 2009a). Results concerning subjective measures of health mirror those using more objective, biology-based measures, including physiological indicators of immune system functioning (Krause and Hayward, 2012) and stress response (Ishida and Okada, 2006).

From a psychological point of view, meaning may help support health because those who feel their lives are more meaningful should be more likely to take care of themselves (e.g. Steger et al., 2015a). Research supports this hypothesis, showing that those high in meaning have better nutritional and dietary habits (Piko and Brassai, 2009), engage in more physical activity (Brassai et al., 2015; Holahan et al., 2011), and have healthier attitudes toward sexual prophylactic use (Steger et al., 2015a). Further, they engage in lower levels of substance use (Brassai et al., 2012; Martin et al., 2011). These habits also appear to extend into the ways in which people utilize the health care system itself. A large study of a representative sample of American older adults showed that those higher in meaning and purpose were more likely to engage in recommended preventative health care services, such as getting cholesterol or mammogram tests, and perhaps as a consequence also spent fewer nights in hospitals (Kim et al., 2014). Reduced hospital stays might indicate a profound economic benefit to meaning in life. Using the United States as just one example, in 2011 alone, the total cost of hospital stays was roughly \$387 billion (Pfundtner et al., 2012). Finally, and perhaps most importantly, people who feel their lives are meaningful have a lower risk of dying and have longer lives (Boyle et al., 2009; Krause, 2009).

So far, then, this chapter has shown that people living a meaningful life are very likely to be happier, more positive and more psychologically mature, anticipate brighter futures, take care of their health better, feel better physically and enjoy all of these qualities for a longer period of time before death. But meaning is not seen to be a commodity, something to be selfishly hoarded or flaunted. Meaning is supposed to be shared. Most scholars agree that there is an inherent self-transcendence to meaning in life, such that meaning increases as people's concerns expand beyond their own interests to include the stakes of other people, other groups, and perhaps even all of life and the universe around them (e.g. Reker and Chamberlain, 2000). Because of this theoretical emphasis on a meaningful life including others, there should be no surprise that time and again, research has revealed that relationships of one sort or the other are the most commonly nominated source of meaning in people's lives (Steger et al., 2013). This research usually asks people to list, or alternatively to rate an existing list, of things that might make their lives meaningful, yielding a lot of richness and texture on how meaning seems relevant to individuals. At the same time, research specifically focusing on what it is about relationships that seems to benefit meaning in life has been relatively sparse (O'Donnell et al., 2014). There are some important clues, however.

Being rejected or ostracized, or feeling excluded, cause reduce perceived meaning in life (e.g. Williams et al., 2002), whereas meaning in life is higher on days when people feel more close and connected to others (Steger and Kashdan, 2009). Family appears to be an especially important source of connection (Delle Fave et al., 2013), and both perceived family cohesion and family satisfaction are positively related to meaning in life (Lightsey and Sweeney, 2008). Within romantic relationships, meaning in life is positively linked to marital satisfaction and marital adjustment (Shek, 1994), better communication between spouses (Kalantarkousheh and Hassan, 2010) and sexual satisfaction (McCann and Biaggio, 1989) and negatively linked to sexual frustration (Sallee and Casciani, 1976). Outside of one's family, social support and self-reported strength of social bonds are both related to meaning (Dunn and O'Brienn, 2009; Hicks and King, 2009; Krause, 2007), and experiencing meaning in one's workplace is associated with greater trust in managers (Wrzesniewski et al., 1997). From these studies it appears that it not only is important to have people in your life and to feel close to them, but it also seems important to have strong and cohesive bonds. Do people high in meaning do anything to maintain such strong bonds or do they merely harvest the fortuitous benefits of being around others? It seems that people high in meaning do give back to their relationships and communities, through volunteering, providing donations, and relationship-improving activities (Steger et al., 2008b).

What Is the Connection between Meaning in Life and Mental Health Recovery?

Finally, as was noted at the beginning of this chapter, more attention has been paid to whether people are experiencing suffering or distress than to whether they are experiencing wellbeing. Ameliorating suffering is a primary goal of many branches of human services, whether this means working to prevent known causes of suffering, such as poverty, inequality and abuse, or helping people to regain functioning through mental health recovery. In this section, research linking meaning in life with psychological distress, disorders and mental health recovery is reviewed.

Meaning in life seems to play a substantial role in reducing psychological suffering. Meaning in life consistently is negatively related to levels of psychological distress and mental

illness, such as symptoms of eating disorders, substance use disorders, post-traumatic stress disorder, depression and anxiety (Park, 2010; Steger et al., 2008a; Steger and Kashdan, 2009; Zika and Chamberlain, 1992). Much of this research has taken place in the context of recovery from tragic or traumatic life events. In most of these models, meaning is a pivotal variable enabling people to move on and often perceive personal growth following trauma (e.g. Linley and Joseph, 2011; Park, 2010; Steger et al., 2015b).

A separate literature has emerged examining the role of meaning in facilitating recovery from mental illness or psychological disorder. At a theoretical level, meaning is one of the key components of models of psychological recovery. For example, meaning and purpose are identified as key processes within a model of psychological recovery that also includes hope, identity, and responsibility (Andresen et al., 2003). Similarly, meaning is a fundamental part of the CHIME model of recovery (Leamy et al., 2011). CHIME stands for *Connect- edness, Hope and optimism about the future, Identity, Meaning in life and Empowerment*. The role of meaning in these models might center on helping people explore their spiritual or religious lives, develop personal goals in their lives or better understand the nature and best use of their strengths (Slade and Wallace, this volume). These models are borne out by evidence that meaning in life predicts better response to treatment for psychological disorders (e.g. Debats, 1996). Thus, meaning in life is linked to better psychological wellbeing, and also to the recovery of psychological functioning following both traumatic events and psychological disorders.

How Is Meaning in Life Measured?

As the review of research presented above shows, meaning in life already has been established as an important facet of wellbeing, and interest has been growing steadily. To continue to advance meaning in life science and practice, particularly in efforts to help people improve their meaning in life, we must be able to reliably measure it. The first measure of meaning in life appeared in the early 1960s, and new measures have been published periodically. The most popular measures often appear to use slightly different understandings and definitions of their target. For example, the first measure of meaning in life included items addressing energy, despair and suicide, and more recent measures appear to prioritize people's abilities to set goals for themselves and maintain active lifestyles (Crumbaugh and Maholick, 1964; Ryff, 1989). Broadening the way in which meaning is measured to include other constructs increases the risk that some of the significant findings yielded by research are due to similarity of the items used rather than to how the variables actually relate to each other. An easy example to use is the relationship between meaning and depression. If the meaning measure asks about despair and suicide, and the depression measure asks about despair and suicide, would it really be earth-shattering if people's scores were related? It is better to use measures that use a more straightforward approach to assessing meaning (e.g. Reker, 1992; Reker and Peacock, 1981). Sometimes meaning-in-life measures are too long to be used frequently – as in clinical settings to measure treatment progress – or in large, representative samples. Some meaning-in-life assessments also have struggled to achieve reasonable psychometric quality, particularly with regard to whether they have a consistent factor structure (e.g. Steger, 2006, 2007).

These issues were the impetus that led me to develop a meaning-in-life measure that could provide simple, straightforward assessment partnered with psychometric properties that met the highest standards. Research so far has been encouraging, but you do not have to

take my word for it. According to an independent review, the Meaning in Life Questionnaire (MLQ; Steger et al., 2006) was the only meaning-in-life measure of dozens that warranted a perfect score based on rigor of development and demonstrated psychometric quality (Brandstätter et al., 2012). Others have presented evidence showing that the MLQ has been used to assess more people than other leading meaning-in-life instruments (Heintzelman and King, 2014b). The MLQ is a simple, straightforward tool that assesses both how meaningful people perceive their lives to be and also how intently people feel they are searching for more meaning in their lives (Steger et al., 2008c, 2011). Brief versions, generally consisting of three items assessing the extent of meaning in people's lives, have been used by governmental agencies for public health epidemiological research (e.g. Kobau et al., 2010) and by nongovernmental research institutes conducting health research around the globe, particularly in poorer nations (Samman, 2007). In cross-national research, the psychometric properties of the full MLQ (e.g. Steger et al., 2008d) and the short version (Steger and Samman, 2012) have proven to be very good (Steger and Shin, 2010). The primary drawback of the MLQ is that it trades comprehensiveness and richness for brevity and strong psychometric performance.

Conclusion

There has been a profound shift in how a successful, healthy life is seen, from reactive models that emphasize ridding oneself of threats, maladies, damage and flaws to more progressive and holistic models that are concerned with threats and damage, but are equally concerned with potential, opportunity, strength and wellbeing. Meaning in life is a variable of increasing importance that deftly spans both sides of these new models of health and flourishing. As people develop meaning in their lives, they also seem to develop powerful psychological characteristics, generative social and interpersonal relationships, physical health and happiness. Given the surge of research and the ready availability of measurement tools, the role of meaning in future work seeking to foster human wellbeing seems secure.

References

- Acuff, G., & Allen, D. (1970). Hiatus in 'meaning': Disengagement for retired professors. *Journal of Gerontology*, 25, 126–128.
- Andresen, R., Oades, L. & Caputi, P. (2003). The experience of recovery from schizophrenia: Towards an empirically-validated stage model. *Australian and New Zealand Journal of Psychiatry*, 37, 586–594.
- Battista, J., & Almond, R. (1973). The development of meaning in life. *Psychiatry*, 36, 409–427.
- Bonebright, C. A., Clay, D. L., & Ankenmann, R. D. (2000). The relationship of workaholism with work–life conflict, life satisfaction, and purpose in life. *Journal of Counseling Psychology*, 47, 469–477.
- Boyle, P. A., Barnes, L. L., Buchman, A. S., & Bennett, D. A. (2009). Purpose in life is associated with mortality among community-dwelling older persons. *Psychosomatic Medicine*, 71, 574–579.
- Boyle, P. A., Buchman, A. S., Wilson, R. S., Yu, L., Schneider, J. A., & Bennett, D. A. (2012). Effect of purpose in life on the relation between Alzheimer disease pathologic changes on cognitive function in advanced age. *Archives of General Psychiatry*, 69, 499–504.
- Brady, M. J., Peterman, A. H., Fitchett, G., Mo, M., & Cella, D. (1999). A case for including spirituality in quality of life measurement in oncology. *Psycho-oncology*, 8, 417–428.
- Brandstätter, M., Baumann, U., Borasio, G. D., & Fegg, M. J. (2012). Systematic review of meaning in life assessment instruments. *Psycho-oncology*, 21, 1034–1052.

- Brassai, L., Piko, B. F., & Steger, M. F. (2012). Existential attitudes and eastern European adolescents' problem and health behaviors: Highlighting the role of the search for meaning in life. *Psychological Record*, 62, 719–734.
- Brassai, L., Piko, B. F., & Steger, M. F. (2015). A reason to stay healthy: The role of meaning in life in relation to physical activity and healthy eating among adolescents. *Journal of Health Psychology*, 20, 473–482.
- Brief, A. P., & Nord, W. R. (1990). *Meanings of occupational work: A collection of essays*. Lexington, MA: Lexington Books.
- Chamberlain, K., & Zika, S. (1988). Religiosity, life meaning, and wellbeing: Some relationships in a sample of women. *Journal for the Scientific Study of Religion*, 27, 411–420.
- Colby, A., Sippola, L., & Phelps, E. (2001). Social responsibility and paid work in contemporary American life. In A. S. Rossi (Ed.), *Caring and doing for others: Social responsibility in the domains of family, work, and community*. Chicago: University of Chicago Press.
- Crumbaugh, J. C., & Maholick, L. T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology*, 20, 200–207.
- Crumbaugh, J. C., Raphael, M., & Shrader, R. R. (1970). Frankl's will to meaning in a religious order. *Journal of Clinical Psychology*, 26, 206–207.
- Debats, D. L. (1996). Meaning in life: Clinical relevance and predictive power. *British Journal of Clinical Psychology*, 35, 503–516.
- Debats, D. L., Drost, J., & Hansen, P. (1995). Experiences of meaning in life: A combined qualitative and quantitative approach. *British Journal of Psychology*, 86, 359–375.
- Debats, D. L., van der Lubbe, P. M., & Wezeman, F. R. A. (1993). On the psychometric properties of the Life Regard Index (LRI): A measure of meaningful life. *Personality and Individual Differences*, 14, 337–345.
- Delle Fave, A., Pozzo, M., Bassi, M., & Cetin, I. (2013). A longitudinal study on motherhood and well-being: Developmental and clinical implications. *Terapia Psicologica*, 31, 21–33.
- Diener, E., & Seligman, M. E. P. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest*, 5, 1–31.
- Dunn, M. G., & O'Brien, K. M. (2009). Psychological health and meaning in life: Stress, social support, and religious coping in Latina/Latino immigrants. *Hispanic Journal of Behavioral Sciences*, 31, 204–227.
- Ebersole, P., & Quiring, G. (1991). Meaning in life depth: The MILD. *Journal of Humanistic Psychology*, 31, 113–124.
- Edwards, M. J., & Holden, R. R. (2001). Coping, meaning in life, and suicidal manifestations: Examining gender differences. *Journal of Clinical Psychology*, 57, 1517–1534.
- Frankl, V. E. (1963). *Man's search for meaning: An introduction to logotherapy*. New York, NY: Washington Square Press.
- Fry, P. S. (2000). Religious involvement, spirituality and personal meaning for life: Existential predictors of psychological wellbeing in community-residing and institutional care elders. *Aging and Mental Health*, 4, 375–387.
- Fry, P. S. (2001). The unique contribution of key existential factors to the prediction of psychological well-being of older adults following spouse loss. *Gerontologist*, 41, 69–81.
- Furrow, J. L., King, P. E., & White, K. (2004). Religion and positive youth development: Identity, meaning, and prosocial concerns. *Applied Developmental Science*, 8(1), 17–26.
- Garfield, C. (1973). A psychometric and clinical investigation of Frankl's concept of existential vacuum and anomie. *Psychiatry*, 36, 396–408.
- George, L. S., & Park, C. L. (2013). Are meaning and purpose distinct? An examination of correlates and predictors. *Journal of Positive Psychology*, 8(5), 365–375.
- Heintzelman, S. J., & King, L. A. (2014a). Life is pretty meaningful. *American Psychologist*, 69, 561–574.
- Heintzelman, S. J., & King, L. A. (2014b). (The feeling of) meaning-as-information. *Personality and Social Psychology Review*, 18, 153–167.

- Hicks, J. A., & King, L. A. (2009). Positive mood and social relatedness as information about meaning in life. *Journal of Positive Psychology*, 4, 471–482.
- Holahan, C. K., Holahan, C. J., Velasquez, K. E., Jung, S., North, R. J., & Pahl, S. A. (2011). Purposiveness and leisure-time physical activity in women in early midlife. *Women and Health*, 51(7), 661–675.
- Ishida, R., & Okada, M. (2006). Effects of a firm purpose in life on anxiety and sympathetic nervous activity caused by emotional stress: Assessment by psychophysiological method. *Stress and Health*, 22, 275–281.
- Jim, H. S., & Andersen, B. L. (2007). Meaning in life mediates the relationship between social and physical functioning and distress in cancer survivors. *British Journal of Health Psychology*, 12, 363–381.
- Jim, H. S., Richardson, S. A., Golden-Kreutz, D. M., & Anderson, B. L. (2006). Strategies used in coping with a cancer diagnosis predict meaning in life for survivors. *Health Psychology*, 25, 763–761.
- Kalantarkousheh, S. M., & Hassan, S. A. (2010). Function of life meaning and marital communication among Iranian spouses in Universiti Putra Malaysia. *Procedia-Social and Behavioral Sciences*, 5, 1646–1649.
- Kennedy, J. E., Kanthamani, H., & Palmer, J. (1994). Psychic and spiritual experiences, health, well-being, and meaning in life. *Journal of Parapsychology*, 58, 353–383.
- Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82, 1007–1022.
- Kim, E. S., Strecher, V. J., & Ryff, C. D. (2014). Purpose in life and use of preventive health care services. *PNAS*, 111, 16, 331–16, 336.
- King, L. A., Hicks, J. A., Krull, J. L., & Del Gaiso, A. K. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology*, 90, 179–196.
- Kobau, R., Sniezek, J., Zack, M. M., Lucas, R. E., & Burns, A. (2010). Well-being assessment: An evaluation of well-being scales for public health and population estimated of well-being among US adults. *Applied Psychology: Health and Well-Being*, 2, 272–297.
- Krause, N. (2007). Longitudinal study of social support and meaning in life. *Psychology and Aging*, 22, 456–469.
- Krause, N. (2009). Meaning in life and mortality. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 64B, 517–527.
- Leamy, M., Bird, V., Le Boutillier, C., Williams, J., & Slade, M. (2011). A conceptual framework for personal recovery in mental health: systematic review and narrative synthesis. *British Journal of Psychiatry*, 199, 445–452.
- Lightsey, O., & Sweeney, J. (2008). Meaning in life, emotion oriented coping, generalized self-efficacy, and family cohesion as predictors of family satisfaction among mothers of children with disabilities. *Family Journal*, 16, 212–221.
- Linley, P. A., & Joseph, S. (2011). Meaning in life and posttraumatic growth. *Journal of Loss and Trauma*, 16(2), 150–159.
- Martin, R. A., MacKinnon, S., Johnson, J., & Rohsenow, D. J. (2011). Purpose in life predicts treatment outcome among adult cocaine abusers in treatment. *Journal of Substance Abuse Treatment*, 40, 183–188.
- Mascaro, N., & Rosen, D. H. (2005). Existential meaning's role in the enhancement of hope and prevention of depressive symptoms. *Journal of Personality*, 73, 985–1014.
- Mascaro, N., & Rosen, D. H. (2006). The role of existential meaning as a buffer against stress. *Journal of Humanistic Psychology*, 46, 168–190.
- Mascaro, N., Rosen, D. H., & Morey, L. C. (2004). The development, construct validity, and clinical utility of the spiritual meaning scale. *Personality and Individual Differences*, 37, 845–860.
- McCann, J. T., & Biaggio, M. K. (1989). Sexual satisfaction in marriage as a function of life meaning. *Archives of Sexual Behavior*, 18, 59–72.
- Newcomb, M. D., & Harlow, L. L. (1986). Life events and substance use among adolescents: Mediating effects of perceived loss of control and meaningless in life. *Journal of Personality and Social Psychology*, 51, 564–577.

- O'Conner, B. P., & Vallerand, R. J. (1998) Psychological adjustment variables as predictors of mortality among nursing home residents. *Psychology and Aging*, 13, 368–374.
- O'Donnell, M. B., Shim, Y., Barenz, J. D., & Steger, M. F. (2015). Revisiting the Meaning in Life Questionnaire, Part 2: Intervention research and clinical relevance. *International Forum for Logotherapy*, 38, 41–48.
- Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological bulletin*, 136, 257.
- Pfuntner, A., Wier, L. M., & Elixhauser, A. (2012). Healthcare Cost and Utilization Project (HCUP) statistical briefs, #144: Overview of hospital stays in the United States, 2011. Rockville, MD: Agency for Health Care Policy and Research.
- Phillips, W. M. (1980). Purpose in life, depression, and locus of control. *Journal of Clinical Psychology*, 36, 661–667.
- Phillips, W. M., Watkins, J. T., & Noll, G. (1974). Self-actualization, self-transcendence, and personal philosophy. *Journal of Humanistic Psychology*, 14, 53–73.
- Piko, B. F., & Brassai, L. (2009). The role of individual and familial protective factors in adolescents' diet control. *Journal of Health Psychology*, 14, 810–819.
- Reid, J. K. (1996) Tickets to adulthood? The relationship between life attitudes, death acceptance, and autonomy in adulthood. *Family Therapy*, 23, 135–149.
- Reker, G. T. (1977). The purpose-in-life test in an inmate population: An empirical investigation. *Journal of Clinical Psychology*, 33, 688–693.
- Reker, G. T. (1992). *Manual: Life Attitude Profile – Revised*. Petersborough, Ontario: Student Psychologists Press.
- Reker, G. T. (2002). Prospective predictors of successful aging in community-residing and institutionalized Canadian elderly. *Ageing International*, 27, 42–64.
- Reker, G. T., & Chamberlain, K. (2000). *Exploring existential meaning: Optimizing human development across the life span*. Thousand Oaks, CA: Sage Publications.
- Reker, G. T., & Peacock, E. J. (1981). The Life Attitude Profile (LAP): A multidimensional instrument for assessing attitudes toward life. *Canadian Journal of Behavioral Science*, 13, 264–273.
- Reker, G. T., Peacock, E. J., & Wong, P. T. P. (1987). Meaning and purpose in life and well-being: A life-span perspective. *Journal of Gerontology*, 42, 44–49.
- Roepke, A. M., Jayawickreme, E., & Riffle, O. M. (2014). Meaning and health: A systematic review. *Applied Research in Quality of Life*, 9, 1055–1079.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141–166.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57, 1069–1081.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of well-being revisited. *Journal of Personality and Social Psychology*, 69, 719–727.
- Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, 9, 1–28.
- Sallee, D. T., & Casciani, J. M. (1976). Relationship between sex drive and sexual frustration and purpose in life. *Journal of Clinical Psychology*, 32, 273–275.
- Samman, E. (2007). Psychological and subjective wellbeing: A proposal for internationally comparable indicators. *Oxford Development Studies*, 35, 459–486.
- Scannell, E. D., Allen, F. C. L., & Burton, J. (2002). Meaning in life and positive and negative well-being. *North American Journal of Psychology*, 4, 93–112.
- Sharpe, D., & Viney, L. (1973). Weltanschauung and the Purpose-in-Life Test. *Journal of Clinical Psychology*, 29(4), 489–491.
- Shek, D. T. L. (1992). Meaning in life and psychological well-being: An empirical study using the Chinese version of the Purpose in Life Questionnaire. *Journal of Genetic Psychology*, 153, 185–200.
- Shek, D. T. (1994). Meaning in life and adjustment amongst midlife parents in Hong Kong. *International Forum for Logotherapy*, 17, 102–107.
- Shek, D. T. L. (1995). Marital quality and psychological well-being of married adults in a Chinese context. *Journal of Genetic Psychology*, 156, 45–56.

- Shek, D. T. L. (2001). Meanings in life and sense of mastery in Chinese adolescents with economic disadvantage. *Psychological Reports*, 88, 711–712.
- Shin, J. Y., Lee, Y. A., & Lee, K.-H. (2005). The effects of life meaning and emotional regulation strategies on psychological well-being. *Korean Journal of Counseling and Psychotherapy*, 17, 1035–1057.
- Simon, L., Arndt, J., Greenberg, J., Pyszczynski, T., & Solomon, S. (1998). Terror management and meaning: Evidence that the opportunity to defend the worldview in response to mortality salience increases the meaningfulness of life in the mildly depressed. *Journal of Personality*, 66(3), 359–382.
- Steger, M. F. (2006). An illustration of issues in factor extraction and identification of dimensionality in psychological assessment data. *Journal of Personality Assessment*, 86, 263–272.
- Steger, M. F. (2007). Structural validity of the Life Regards Index. *Measurement and Evaluation in Counseling and Development*, 40, 97–109.
- Steger, M. F. (2009). Meaning in life. In S. J. Lopez (Ed.), *Oxford Handbook of Positive Psychology* (2nd ed.) (pp. 679–687). Oxford, UK: Oxford University Press.
- Steger, M. F. (2012). Experiencing meaning in life: Optimal functioning at the nexus of spirituality, psychopathology, and well-being. In P. T. P. Wong (Ed.), *The human quest for meaning* (2nd ed.) (pp. 165–184). New York, NY: Routledge.
- Steger, M. F. (2013). Assessing meaning and quality of life. In K. Geissinger (Editor in Chief), B. A. Bracken, J. F. Carlson, J. C. Hansen, N. R. Kuncel, S. P. Reise, & M. C. Rodriguez (Eds.), *APA Handbook of Testing and Assessment in Psychology*, Vol. 2 (pp.489–499). Washington, DC: American Psychological Association.
- Steger, M. F., Fitch-Martin, A., Donnelly, J., & Rickard, K. M. (2015a). Meaning in life and health: Proactive health orientation links meaning in life to health variables among American undergraduates. *Journal of Happiness Studies*, 16, 583–597.
- Steger, M. F., & Frazier, P. (2005). Meaning in life: One link in the chain from religion to well-being. *Journal of Counseling Psychology*, 52, 574–582.
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, 53, 80–93.
- Steger, M. F., Frazier, P., & Zacchanini, J. L. (2008a). Terrorism in two cultures: Traumatization and existential protective factors following the September 11th attacks and the Madrid train bombings. *Journal of Trauma and Loss*, 13, 511–527.
- Steger, M. F., & Kashdan, T. B. (2009). Depression and everyday social activity, intimacy, and well-being. *Journal of Counseling Psychology*, 56, 289–300.
- Steger, M. F., Kashdan, T. B., & Oishi, S. (2008b). Being good by doing good: Eudaimonic activity and daily well-being correlates, mediators, and temporal relations. *Journal of Research in Personality*, 42, 22–42.
- Steger, M. F., Kashdan, T. B., Sullivan, B. A., & Lorentz, D. (2008c). Understanding the search for meaning in life: Personality, cognitive style, and the dynamic between seeking and experiencing meaning. *Journal of Personality*, 76, 199–228.
- Steger, M. F., Kawabata, Y., Shimai, S., & Otake, K. (2008d). The meaningful life in Japan and the United States: Levels and correlates of meaning in life. *Journal of Research in Personality*, 42, 660–678.
- Steger, M. F., Mann, J. R., Michels, P., & Cooper, T. C. (2009a). Meaning in life, anxiety, depression, and general health among smoking cessation patients. *Journal of Psychosomatic Research*, 67, 353–358.
- Steger, M. F., Oishi, S., & Kashdan, T. B. (2009b). Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. *Journal of Positive Psychology*, 4, 43–52.
- Steger, M. F., Oishi, S., & Kesibir, S. (2011). Is a life without meaning satisfying? The moderating role of the search for meaning in satisfaction with life judgments. *Journal of Positive Psychology*, 6, 173–180.

- Steger, M. F., Owens, G. P., & Park, C. L. (2015b). Violations of war: Testing the meaning-making model among military veterans. *Journal of Clinical Psychology, 71*, 105–116.
- Steger, M. F., & Samman, E. (2012). Assessing meaning in life on an international scale: Psychometric evidence for the Meaning in Life Questionnaire-Short Form among Chilean households. *International Journal of Wellbeing, 2*, 182–195.
- Steger, M. F., Shim, Y., Brueske, L., Rush, B., Shin, J. & Merriman, L. (2013). The mind's eye: A photographic method for understanding meaning in people's lives. *Journal of Positive Psychology, 8*, 530–542
- Steger, M. F., & Shin, J. Y. (2010). The relevance of the Meaning in Life Questionnaire to therapeutic practice: A look at the initial evidence. *International Forum on Logotherapy, 33*, 95–104.
- Stevens, M. J., Pfost, K. S., & Wessels, A. B. (1987). The relationship of purpose in life to coping strategies and time since the death of a significant other. *Journal of Counseling and Development, 65*, 424–426.
- Swann, W. B., Jr., Rentfrow, P. J., & Gunn, J. S. (2003). Self-verification: The search for coherence. In Leary, M., & Tangney, J. (Eds.), *Handbook of Self and Identity* (pp. 367–383). New York, NY: Guilford.
- Tedeschi, R. G., Park, C. L., & Calhoun, L. G. (1998). Posttraumatic growth: Conceptual issues. In Tedeschi, R. G., Park, C. L., & Calhoun, L. G. (Eds.), *Posttraumatic Growth: Theory and Research on Change in the Aftermath of Crisis* (pp. 1–22). Mahwah, NJ: Lawrence Erlbaum.
- Thompson, N. J., Coker, J., Krause, J. S., & Henry, E. (2003). Purpose in life as a mediator of adjustment after spinal cord injury. *Rehabilitative Psychology, 48*, 100–108.
- Thompson, S. C., & Pitts, J. (1993). Factors relating to a person's ability to find meaning after a diagnosis of cancer. *Journal of Psychosocial Oncology, 11*, 1–21.
- Tryon, W., & Radzin, A. (1972). Purpose-in-life as a function of ego resiliency, dogmatism, and biographical variables. *Journal of Clinical Psychology, 28*, 544–545.
- Williams, K. D., Cheung, C. K. T., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the Internet. *Journal of Personality and Social Psychology, 79*, 748–762.
- Wong, P. T. P. (1998). Implicit theories of meaningful life and development of Personal Meaning Profile. In Wong, P. T. P., & Fry, P. S. (Eds.), *The Human Quest for Meaning* (pp. 111–140). Mahwah, NJ: Lawrence Erlbaum.
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality, 31*, 21–33.
- Zika, S., & Chamberlain, K. (1987). Relation of hassles and personality to subjective well-being. *Journal of Personality and Social Psychology, 53*, 155–162.
- Zika, S., & Chamberlain, K. (1992). On the relation between meaning in life and psychological well-being. *British Journal of Psychology, 83*, 133–145.