In selecting measures for a comprehensive assessment of well-being, it is essential to include indicators of psychological need satisfaction

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1. Introduction

Human well-being – understood broadly as feeling, doing, and functioning well in life – has been increasingly recognized as a key target in both politics and policy contexts as well as in health care and promotion of mental health (Keyes, 2007; OECD, 2013; Prilleltensky, 2005; Ryff et al., 2004). Research has also demonstrated how human well-being is a key predictor of various health-related outcomes, including longevity (Cohen et al., 2016; Howell et al., 2007; Lyubomirsky et al., 2005; Martín-María et al., 2017). The recognition of well-being as both an outcome and as a predictor of other health-related factors has made the accurate measurement of well-being a crucial issue in health care (VanderWeele et al., 2020).

However, the expanding number of conceptions of well-being that measure an increasingly wide array of disparate components is a major obstacle for the progress of a comparable and cumulative science of well-being (Lindert et al., 2015; Linton et al., 2016; Martela and Sheldon, 2019). Tens of different conceptualizations of well-being exist, with the associated measures sometimes having almost no overlap at all (Cooke et al., 2016; Martela and Sheldon, 2019). In an attempt to transcend this untenable situation, VanderWeele et al. (2020) recently synthesized the field to provide recommendations on what constructs of well-being should be measured, and how to measure them. The key constructs they recommend to be measured include evaluative well-being (life satisfaction) and emotional well-being (positive and negative affect) as well as broader constructs such as eudaimonic well-being and human flourishing. Finding such synthesis is crucially important to ensure that measures of well-being in various contexts are comparable and contribute to an accumulating body of knowledge about the antecedents and outcomes of human well-being.

In this spirit, we want to complement the set of recommendations by VanderWeele et al. (2020) by arguing that there is a crucial aspect missing from the dimensions of well-being that they recommend to measure: Human psychological needs. Humans are biologically and psychologically constructed such that there are specifiable experiences that all people require in order to survive, thrive, and function well (Doyal and Gough, 1991; Pittman and Zeigler, 2007; Ryan and Deci, 2017). While all organisms have certain physiological needs such as the need for water and hydration, the complex cognitive capacity of humans means that they also have certain psychological needs required for healthy psychological development, growth, integrity, and well-being. Accordingly, a long line of research within psychology has aimed to...
identify those universal psychological needs that are essential for the psychological health and well-being of the person (Alderfer, 1972; Baumeister and Leary, 1995; Deci and Ryan, 2000; Maslow, 1954; McClelland, 1985; Murray, 1938). This has led to a broad agreement around certain needs, especially for the psychological need for relatedness or belonging (Alderfer, 1972; Baumeister and Leary, 1995; Maslow, 1954; McClelland, 1985; Ryan, 1995), for competence or efficacy (Bandura, 1977; Ryan and Moller, 2017; White, 1959), and, at least in some perspectives, for autonomy (Doyal and Gough, 1991; Ryan and Deci, 2017; Yu et al., 2018).

These needs have been especially researched within Self-Determination Theory (SDT; Ryan and Deci, 2017; Deci and Ryan, 2000), where their importance for well-being has been demonstrated in literally hundreds of empirical studies conducted by many independent research groups around the world (reviewed in Ryan and Deci, 2017; Vansteenkiste et al., 2020) and in contexts ranging from education (e.g., Jang et al., 2016) and sports coaching (e.g., Curran et al., 2016) to work (Van den Broeck et al., 2016). A meta-analysis in the health care and health promotion context alone identified 184 studies examining SDT and basic psychological needs (Ng et al., 2012). According to SDT, autonomy is about a sense of volition and an internal locus of causality, competence is about a sense of mastery, effectance and efficacy, and relatedness is about a sense of having caring relationships in one’s life.

VanderWeele et al. (2020, p. 3) emphasize that a comprehensive understanding of well-being requires the “assessment of multiple aspects of psychological well-being.” We agree, and see that it is crucially important to measure psychological needs, for a more complete understanding of the person’s psychological situation and well-being. Although positive and negative affect and general life evaluations can serve as prime indicators of whether a person is feeling well, the assessment of psychological needs gives us knowledge on why the person is feeling well (Martela and Sheldon, 2019; Ryan, Huta and Deci, 2008).

The psychological needs function as essential “nutrients” humans need from the environment to experience well-being, thus typically mediating the influence of various behavioral strategies and environmental factors on subjective well-being (Deci and Ryan, 2000; Martela and Sheldon, 2019). Measuring psychological needs thus gives a richer view of the person’s psychological functioning and what makes them feel well.

The inclusion of psychological needs is especially important when the aim is to measure human flourishing, defined as complete human well-being where “all aspects of a person’s life are good” (VanderWeele, 2017, p. 8149). It is hard to see how a person could be flourishing if one’s basic psychological needs are thwarted. A complete state of psychological well-being seems impossible without the satisfaction of one’s psychological needs. Indeed, perspectives on flourishing have often explicitly drawn from theories of psychological needs when choosing what dimensions to include in their assessments of flourishing (e.g., Dierer et al., 2010). Further, given that any element of flourishing should be viewed as an end in itself and nearly universally desired (VanderWeele, 2017), it is worth noting that “values associated with autonomy, relatedness, and competence show a universal pattern of high importance and high consensus” according to a cross-cultural study of values including 60 different countries (Fischer and Schwartz, 2011, p. 1127), demonstrating that these three basic psychological needs are something people across cultures value.

The psychological needs are also central, when an often recommended distinction is made between hedonic, evaluative, and eudaimonic conceptions of well-being (Graham et al., 2018; National Research Council, 2013; OECD, 2015; Steptoe et al., 2015; VanderWeele et al., 2020). While hedonic and evaluative conceptions are relatively well understood, eudaimonia is still “less well fleshed out” (OECD, 2013, p. 32) and vague, lacking required unification (Heintzelman, 2018; Huta and Waterman, 2014). Accordingly, it has been argued that psychological needs could provide the “common core” for the eudaimonic indicators of well-being (Martela and Sheldon, 2019, p. 459), providing a parsimonious set of indicators about key aspects of eudaimonia. Here eudaimonia is understood as being fundamentally about functioning well rather than just feeling well (Huta and Ryan, 2010; Ryan and Martela, 2016). Instead of seeing hedonia and eudaimonia as two different types of feelings, this stream of research sees eudaimonia as being about the key motives, activities, and functioning that lead to subjective well-being. In other words, eudaimonic activities and functioning should be seen as key antecedents of indicators of feeling well. And as regards psychological functioning, psychological need satisfaction should be seen as the core of such functioning (Martela and Sheldon, 2019). Thus, we see that indicators of eudaimonia that tend to focus on meaning and purpose (which are outcomes of need satisfaction, see Martela et al., 2018), should be complemented with ways to assess psychological need satisfaction.

There are several theories of psychological needs, as noted, but the theory that has been subject to most comprehensive empirical research program is Self-Determination Theory (Ryan and Deci, 2017), which recognizes three basic psychological needs: autonomy, competence, and relatedness. Given that there are well-validated scales to measure these three needs translated to many languages (Chen et al., 2015) and included in international surveys (e.g., ESS, round 6; Huppert et al., 2013), measurement of autonomy, competence, and relatedness would provide a concise way to assess the psychological need satisfaction of an individual, and through that receive key information about the person’s psychological functioning and flourishing. The Basic Psychological Need Satisfaction and Frustration Scale (BPNSFP; Chen et al., 2015) is currently the most validated and utilized scale for need satisfaction. It measures the three needs with four items each, but if there is room for only 1 item per need, we recommend using the following items from the BPNSFP:

1. I feel that my decisions reflect what I really want. (Autonomy)
2. I feel confident that I can do things well. (Competence)
3. I feel close and connected with other people who are important to me. (Relatedness)

Accordingly, we argue that “the needs category provides a parsimonious set of elements at the core of the well-being construct” (Martela and Sheldon, 2019, p. 458) and thus should be included in various attempts to measure human well-being more comprehensively. Indicators of psychological need satisfaction focus on key elements of experienced well-being deeply rooted in human nature. Measuring autonomy, competence, and relatedness along with SWB in future studies of well-being would thus offer a broader view of the well-being of an individual, and help identify key ways to improve well-being in both policy and health care contexts.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

Alderfer, C.P., 1972. Existence, Relatedness, and Growth: Human Needs in Organizational Settings. Free Press, New York.
Bandura, A., 1977. Self-efficacy: toward a unifying theory of behavioral change. Psychol. Rev. 84 (2), 191–215.
Baumeister, R.F., Leary, M.R., 1995. The need to belong: Desire for interpersonal attachments as a fundamental human motivation. Psychol. Bull. 117 (3), 497-529.
Chen, B., Vansteenkiste, M., Beyers, W., Boone, L., Deci, E.L., Van den Kaepp-Deeerer, J., Duriez, B., Lenz, W., Matos, L., Mouratidis, A., Ryan, R.M., Sheldon, K.M., Soenens, B., Van Petegem, S., Vertoyn, J., 2015. Basic psychological need satisfaction, need frustration, and need strength across four cultures. Motiv. Emot. 39 (2), 216–236.
Cohen, R., Ravish, C., Rozanski, A., 2016. Purpose in life and its relationship to all-cause mortality and cardiovascular events: a meta-analysis. Psychosom. Med. 78 (2), 122-133. https://doi.org/10.1017/PYM.20000000000000274.
Cooke, P.J., Melchert, T.P., Connor, K., 2016. Measuring well-being: a review of instruments. Counsel. Psychol. 44 (5), 730–737.
Curran, T., Hill, A.P., Ntoutmanis, N., Hall, H.K., Jovett, G.E., 2016. A three-wave longitudinal test of self-determination theory’s mediation model of engagement and disaffection in youth sport. J. Sport Exer. Psychol. 38 (1), 15–29.
Deci, E.L., Ryan, R.M., 2000. The ‘what’ and ‘why’ of goal pursuits: Human needs and the self-determination of behavior. Psychol. Inq. 11 (4), 227–266.
Diener, E., Wirtz, D., Wem, W., Kim-Prieto, C., Choi, D.-W., Oishi, S., Biswas-Diener, R., 2010. New well-being measures: Short scales to assess flourishing and positive and negative feelings. Soc. Indic. Res. 97 (2), 143–156.
Doyal, L., Gough, I., 1991. A Theory of Human Need. Macmillan Education.
Fischer, R., Schwartz, S., 2011. Whence differences in value priorities? Individual, cultural, or artificial sources? J. Cross Cult. Psychol. 42 (7), 1127–1144.
Graham, C., Laffan, K., Pinto, S., 2018. Well-being in metrics and policy. Science 362 (6412), 287–288.
Heintzelman, S.J., 2018. Eudaimonia in the contemporary science of subjective well-being: Psychological well-being, self-determination, and meaning in life. In: Diener, E., Oishi, S., Taylor, L. (Eds.), Handbook of well-being. DEF Publishers. www.nobascholar.com.
Howell, R.T., Kern, M.L., Lyubomirsky, S., 2007. Health benefits: meta-analytically determining the impact of well-being on objective health outcomes. Health Psychol. Rev. 1 (1), 83–136.
Huppert, F.A., Marks, N., Michaelson, J., Vanquez, C., & Vitterso, J. (2013). ESS Round 6 Module on Personal and Social Wellbeing—Final Module in Template. Centre for Comparative Social Surveys, City University London.
Huta, V., Ryan, R.M., 2010. Pursuing pleasure or virtue: the differential and overlapping well-being benefits of hedonic and eudaimonic motives. J. Happiness Stud. 11 (6), 735–762.
Huta, V., Waterman, A.S., 2014. Eudaimonia and its distinction from hedonics: Developing a classification and terminology for understanding conceptual and operational definitions. J. Happiness Stud. 15 (6), 1425–1456.
Jang, H., Kim, E.J., Reeve, J., 2016. Why students become more engaged or more disengaged during the semester: a self-determination theory dual-process model. Learn. Instr. 43, 27–38.
Keyes, C.L.M., 2007. Promoting and protecting mental health as flourishing: a complementary strategy for improving national mental health. Am. Psychol. 62 (2), 109–119.
Lindert, J., Bain, P.A., Kuhlmanzky, L.D., Stein, C., 2015. Well-being measurement and the WHO health policy Health 2010: systematic review of measurement scales. Eur. J. Pub. Health 25 (4), 731–740. https://doi.org/10.1093/eurpub/cku193.
Linton, M.-J., Dieppe, P., Medina-Lara, A., 2016. Review of 99 self-report measures for assessing well-being in adults: exploring dimensions of well-being and developments over time. BMJ Open 6 (7), e010641. https://doi.org/10.1136/bmjopen-2015-010641.
Lyubomirsky, S., King, L., Diener, E., 2005. The benefits of frequent positive affect: does happiness lead to success? Psychol. Bull. 131 (6), 803–855.
Martela, F., Ryan, R.M., Steger, M.F., 2018. Meaningfulness as satisfaction of autonomy, competence, relatedness, and benificentness: comparing the four satisfactions and positive affect as predictors of meaning in life. J. Happiness Stud. 19 (5), 1281–1282. https://doi.org/10.1007/s10902-017-9869-7.
Martela, F., Sheldon, K.M., 2019. Clarifying the concept of well-being: Psychological need-satisfaction as the common core connecting eudaimonic and subjective well-being. Rev. General Psychol. 23 (4), 458–474.
Martin-María, N., Miret, M., Caballero, F.F., Rico-Urbe, L.A., Steptoe, A., Chatterji, S., Ayuso-Mateos, J.L., 2017. The impact of subjective well-being on mortality: a meta-analysis of longitudinal studies in the general population. Psychosom. Med. 79 (5), 565–575. https://doi.org/10.1016/j.psycho.2016.08.038.
Manlow, A.H., 1954. Motivation and Personality. Harper & Row.
McClelland, D.C., 1985. Human Motivation. Scott Foresman.
Murray, H.A., 1938. Explorations in Personality. Oxford University Press.
National Research Council, 2013. Subjective well-being: Measuring happiness, suffering, and other dimensions of experience. National Academies Press.
Ng, J.Y.Y., Ntoutmanis, N., Thøgersen-Ntoumani, C., Deci, E.L., Ryan, R.M., Duda, J.L., Williams, G.C., 2012. Self-determination theory applied to health contexts: a meta-analysis. Perspect. Psychol. Sci. 7 (4), 325–340. https://doi.org/10.1177/1745691612447309.
OECD. (2013). OECD Guidelines on Measuring Subjective Well-being. OECD Publishing.
Pittman, T. S., & Zeigler, K. R. (2007). Basic human needs. In A. W. Kruglanski & E. T. Higgins (Eds.), Social psychology: Handbook of basic principles. Second edition. (pp. 473–489). The Guilford Press.
Prilleltensky, I., 2005. Promoting well-being: time for a paradigm shift in health and human services. Scand. J. Public Health 33 (66 suppl), 53–60.
Ryan, R.M., 1995. Psychological needs and the facilitation of integrative processes. J. Pers. 63 (3), 397–427. https://doi.org/10.1111/j.1467-9450.1995.tb0051z.
Ryan, R.M., Deci, E.L., 2017. Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness. Guilford Press.
Ryan, R.M., Huta, V., Deci, E.L., 2008. Living well: a self-determination theory perspective on eudaimonia. J. Happiness Stud. 9 (1), 139–170. https://doi.org/10.1007/s10902-006-9023-4.
Ryan, R.M., Martela, F., 2016. Eudaimonia as a way of living: Connecting Aristotle with self-determination theory. In: Vitterso, J. (Ed.), Handbook of Eudaimonic Wellbeing. Springer, pp. 109–122.
Ryan, R.M., Moller, A.C., 2017. Competence as central, but not sufficient, for high-quality motivation: A self-determination theory perspective. In: Elliot, A.J., Dweck, C.S., Yeager, D.S. (Eds.), Handbook of Competence and Motivation (2nd ed.): Theory and Application. Guilford Press, pp. 214–231.
Ryff, C.D., Singer, B.H., Dienberg Love, G., 2004. Positive health: connecting well-being with biology. Philos. Trans. R. Soc. Lond. B Biol. Sci. 359 (1449), 1383–1394.
Steptoe, A., Deaton, A., Stone, A.A., 2015. Subjective wellbeing, health, and ageing. The Lancet 385 (9968), 14–20.
Van den Broeck, A., Ferris, D.L., Chang, C.-H., Rosen, C.C., 2016. A review of self-determination theory’s basic psychological needs at work. J. Manage. 42 (5), 1195–1229. https://doi.org/10.1177/0149206316620058.
VanderWeele, T.J., 2017. On the promotion of human flourishing. Proc. Natl. Acad. Sci. 114 (31), 8148–8156.
VanderWeele, T.J., Trudel-Fitzgerald, C., Allin, P., Farrelly, C., Fletcher, G., Frederick, D. E., Hall, J., Helliwell, J.F., Kim, E.S., Lauinger, W.A., Lee, M.T., Lyubomirsky, S., Margolis, S., McNeely, E., Messer, N., Tay, L., Viswanath, V., Wąsza-Bialowska, D., Kuhsnisky, L.D., 2020. Current recommendations on the selection of measures for well-being. Prev. Med. 133, 106004. https://doi.org/10.1016/j.ypmed.2020.106004.
Vansteenkiste, M., Ryan, R.M., Soenens, B., 2020. Basic psychological need theory: Advancements, critical themes, and future directions. Motiv. Emot. 44 (1), 1–31. https://doi.org/10.1007/s11031-019-09818-1.
White, R.W., 1959. Motivation reconsidered: the concept of competence. Psychol. Rev. 66 (5), 297–333.
Yu, S., Levenque-Bristol, C., Masda, Y., 2018. General need for autonomy and subjective well-being: a meta-analysis of studies in the US and East Asia. J. Happiness Stud. 19 (6), 1863–1882. https://doi.org/10.1007/s10902-017-9882-2.