

Positive psychology and subjective well-being

Positive psychology (PP) marks a deliberate break from the predominant focus on pathology and negative functioning which the majority of psychological disciplines have prioritised in research since the field's inception. It is defined as the study of positive subjective experience (Sin & Lyubomirsky, 2009), optimal functioning (Kern, Waters, Adler, & White, 2014) and the promotion of happiness and well-being (Frisch, 2013). PP aims to identify the psychosocial factors that influence such domains as the individual's quality of life, well-being, happiness, meaning, and character strengths to formulate interventions which promote and improve positive functioning (Frisch, 2013).

Psychological well-being (WB) is an area which has garnered much attention and research within PP. However, as a construct well-being is not readily available to be measured as it is multifaceted and encompasses functioning across a variety of life domains (Sin & Lyubomirsky, 2009); thus, all measures of WB test several indicators in different domains. Ryff and Keyes (1995) posit 6 domains, Seligman (2011) 5 components, and Huppert and So (2013) 10 items of flourishing. WB is not merely the absence of negative processing, rather extends to include eudemonic well-being factors such as self-acceptance and autonomy (Ryan & Deci; 2001), and subjective well-being (SWB) factors such as life-satisfaction (Diener, Inglehart, & Tay, 2013). Kern et al., (2014) highlight how all major models and measures of SWB include positive (PA) and negative affect (NA), and high and low states of arousal.

The study of SWB concentrates on the evaluations people make of their emotions and their lives, at present and retrospectively, including their moods, reactions to events, life-satisfaction appraisals, and fulfilment in a host of areas, e.g., work and relationships (Diener et al., 2003; Diener et al., 2017). Thus, SWB is a scientific measure of happiness which boasts coherent and plausible findings. The facets of which have consistent associations with other variables and are separable under factor analyses, as such Diener et al., (2017) emphasize the importance of assessing each individually. High ratings of SWB are defined by low negative and high PA and high life-satisfaction (Frisch, 2013). However, such scores of flourishing tend to be quite uncommon, this illustrates the need to establish viable and effective means of enhancing well-being is of vital importance and is a primary focus of PP (Sin & Lyubomirsky, 2009).

PP research has greatly increased our understanding of SWB by identifying several demographic and psychological factors which influence the levels of its component facets, and what is resultantly influenced by them. Converging evidence has consolidated in the consensus that the variance of SWB is divisible into three major contributing factors. 10% of the variance is attributable to circumstantial factors, e.g., marital status and income level (Diener et al., 2006), 40% of the variance is attributable to intentional activities (Lyubomirsky, Sheldon, & Schkade, 2005), with heritability constituting approximately 50% of the remaining variance (Lykken and Tellegen 1996). However, genetic determinants are subject to direct alteration by an individual's choices (Roysamb, Nes, & Vitterso, 2014) and the level of variability in one's environment (Diener et al., 2017).

Income is one circumstantial factor which directly affects SWB with higher incomes being indicative of higher outcomes (Fahey, Whelan, & Maitre, 2005), this finding is consistent even within relatively poor regions such as South Africa (Cramm, Moller and Nieboer, 2010), and globally with a positive association evident between a nation's gross domestic product and SWB (Marks, Abdallah, Simms & Thompson, 2006). Life satisfaction, more so than feeling, is heavily affected by income at the individual and national level (Diener et al., 2017). Social relationships have a major impact on SWB (Diener & Seligman, 2002) especially on PA (Tay & Diener, 2011), and high levels of positive emotions reciprocally raise sociability (Berry and Hansen, 1996), and high SWB improves social relationships (Diener et al., 2017). However, demographic determinants such as education level, and marital status account for a minute amount of the variance in SWB measures (Diener et al., 2003).

Many events can instigate changes in one's SWB, and these alterations often exhibit extensive longevity. In a meta-analysis of longitudinal studies Luhmann et al., (2012) illustrate the long-lasting effects of changes in circumstance such as unemployment and marriage on life-satisfaction and PA and NA. However, negative events appear to produce the most salient long-term effects and can result in "scarring" whereby one's SWB struggles to return to its normal level even after an unfortunate circumstance has been resolved or alleviated (Clark, Georgellis, & Sanfey, 2001; Deiner et al., 2017). However, if "scarring" does not occur, individuals typically adapt to their circumstances and rebound after major life-events, as SWB has been shown to exhibit decent stability over time and possesses strong associations with persistent personality traits (Deiner et al., 2003). Greater SWB can benefit one's health and has been repeatedly shown to increase longevity as happier individuals suffer from fewer ailments and live longer lives (Diener & Chan, 2011). Adolescents with high levels of SWB achieve significantly greater outcomes across a variety of important domains such as physical health, school satisfaction, social relationships and self-perceptions (Roth et al. 2017).

PP has long sought to identify and develop exercises that can improve one's SWB. Many effective manipulations have been determined; these include mindfulness training (Brown & Ryan, 2003), yoga, relaxation and stress management interventions (Yadav et al., 2012), methods of self-disclosure such as blogging (Ko & Kuo, 2009) and sharing positive experiences (Burton & King, 2004), the cultivation and expression of gratitude (Emmons & McCullough, 2003; Seligman, et al., 2005), deliberately fostering a kinder demeanour and acting on this adopted trait (Lyubomirsky et al., 2005), hopeful/ goal-directed thinking (Oudou & Vella-Brodrick, 2013), making good use of one's character strengths (Park, Peterson, & Seligman, 2004), increasing "flow" states (Frisch, 2013), and physical activity programmes of as little as 30 minutes of moderate exercise conducted six times a week (Fox, 1999).

Furthermore, some of the more potent of these manipulations have been incorporated into specific positive psychology interventions (PPIs). Each of the PPI strategies are designed to encourage greater positive functioning (Sin & Lyubomirsky, 2009) by targeting the 40% of variance attributable to volitional activities (Lyubomirsky et al., 2005), they are brief, cost-effective and self-administered (Layous & Lyubomirsky, 2014), and demonstrate significant, enduring enhancements on several indicators of SWB (Roth et al., 2017). A meta-analysis of 39 studies demonstrated the significant enhancements on SWB and reductions in depressive symptoms caused by participation in a PPI, with small significant effects shown to be partly sustained over 3-6 month follow-ups (Boiler et al. 2013). Sin & Lyubomirsky emphasize the role of PPIs in building strengths and fostering positive attitudes, and that they are not aimed at directly treating any pathological tendencies, thus PPIs maintain a purely PP ethos.

Seligman et al., (2005) constructed three effective PPIs using randomised control trials administered online to 577 participants. These interventions included gratitude cultivation using the Three Good Things (TGT), and the gratitude visit methods, and the utilisation of a character strength in a novel way (Sear & Vella-Brodrick, 2013). The TGT intervention involves considering three events which occurred in a day and their causes, and aids individuals in acknowledging what they have in life as opposed to what they lack (Emmons and McCullough 2003). Gratitude interventions reduce NA as feelings of gratitude are incongruent to negative emotions, furthermore they aid in promoting the savouring of pleasurable experiences (Oudou & Vella-Brodrick, 2013). TGT was shown to increase SWB for 6 months, with significant increases in happiness and decreases in depression scores (Seligman et al., 2005). The gratitude visit was also evidently beneficial at the one week and one-month follow-ups (Sear & Vella-Brodrick, 2013). Watkins, Uher & Pichinevskiy (2015) however, expound the need for caution in interpreting such results regarding the effects of gratitude interventions as not all studies have revealed significant effects (Wood, Froh & Geraghty, 2010) and often the effects of those that have may be attributable to the control condition actually causing decreases in SWB. Thus, Watkins et al. (2015) controlled for these confounds in their study and

demonstrated a significant increase in SWB with their 3 blessings gratitude intervention, furthermore, the effects climbed after treatment reaching their peak 5 weeks later. This they claim is due to gratitude PPIs training individuals to utilize more beneficial cognitive biases.

The Best Possible Self (BPS) intervention is designed to encourage hopeful and goal-directed thinking, it consists of imaging and writing about achieving one's life goals and dreams (Sheldon and Lyubomirsky 2006). This PPI increases SWB as its self-reflective methods provide greater insight into one's goals and values, qualities which are associated with greater PA and functioning (Odou & Vella-Brodrick, 2013). King (2001) conducted the first assessment of the PPI, in a sample of 81 students significant increase in mood and well-being were observed, compared to the control group. Similarly, Sheldon and Lyubomirsky (2006) compared the BPS PPI with a gratitude expression PPI, and a placebo control, with the BPS intervention proving to be the most effective. Seear and Vella-Brodrick (2013) found only partial support for the hypotheses that the BPS and TGT PPIs would increase WB and PA, whilst decreasing NA post intervention, and at a 2-week follow-up. The BPS intervention exhibited the greatest decrease in NA, however, it did not significantly increase participants' PA when compared to the control group, contrary to previous studies (King, 2001). Mongrain and Anselmo-Matthews (2012) replicated Seligman and colleague's (2005) study identically but utilized more powerful placebos. Compared to the expectancy control condition, the PPIs produced greater increases in happiness, however, the positive placebo produced effects as significant as the "Using Strengths in a New Way" intervention and the TGT intervention. Furthermore, the PPIs did not lead to significant decreases in depression scores over time compared to the control group. BPS along with TGT are validated PPIs that can improve SWB effectively, however, they do not carry the same success rates for all individuals (Odou & Vella-Brodrick, 2013).

PPI studies have yielded mixed finding, with many studies failing to find beneficial effects overall compared with placebo or no-treatment control groups (Sin & Lyubomirsky, 2009), thus PPIs can either cause improvements in SWB factors or no change over a period of time (Kaplan et al., 2014; Lyubomirsky et al., 2011; Sergeant & Mongrain, 2011). This may be attributable to individual differences, and mean differences between cultures, such as genetics and early rearing in childhood (Diener et al., 2003). Members of individualist cultures have also been shown to benefit more from PPIs than their collectivist counterparts (Lyubomirsky et al., 2011), Eckersley (2013) criticizes this trend and suggests that SWB is actually a measure of Westernization and its associated desirable traits such as autonomy and achievement, and not universal human WB. Sin and Lyubomirsky (2009) thus emphasize the consideration of each client's cultural background and adopting a PPI which best suits their idiographic inclinations. Person-activity fit has proved crucial in the administration of effective PPIs, and congruence between an individuals' strengths, needs and personality and the chosen PPI are essential to successful outcomes (Lyubomirsky et al. 2005; Seear & Vella-Brodrick, 2013).

Continued practice and levels of motivation also play a crucial role in the effectiveness of PPIs. Seligman et al., (2005) and Lyubomirsky et al., (2011) both expound the increased benefit on SWB and happiness when the practices are continued after the intervention, and this continuity and habituation insures the longevity of improvements on one's SWB over time (Deiner et al., 2017). Self-motivation is also a key differential factor associated with continued practice and predicts greater PA outcomes at follow-up (Mongrain, & Alsemo-Matthews, 2012; Sheldon and Lyubomirsky, 2006). Furthermore, multitarget PPIs, and undertaking multiple PPIs simultaneously, seem to produce greater beneficial outcomes than the administration of an individual single-target intervention (Roth et al., 2017; Sin & Lyubomirsky, 2009). As such it is evident that PP has contributed much to our understanding of SWB, however, PPIs still require further refinement to account for the large number of individual differences which necessitate customized intervention strategies to improve one's SWB.

