Six Ways to Well-Being (6W-WeB)

Geetanjali Basarkod, Joseph Ciarrochi, and Baljinder Sahdra

Contents

Abstract

Behavior-focused interventions such as Acceptance and Commitment Therapy (ACT) aim to activate value-consistent behaviors. However, few measures

G. Basarkod (✉) · J. Ciarrochi · B. Sahdra
Institute for Positive Psychology and Education, Australian Catholic University, North Sydney, NSW, Australia
e-mail: Geetanjali.Basarkod@acu.edu.au; joseph.ciarrochi@acu.edu.au; baljinder.sahdra@acu.edu.au

O. N. Medvedev et al. (eds.), *Handbook of Assessment in Mindfulness Research*,
https://doi.org/10.1007/978-3-030-77644-2_67-2

comprehensively assess what these behaviors are and why individuals engage in them (i.e., motivation). Building on previous research on ACT and self-determination theory, a new behavior-focused measure of valued action called the Six Ways to Well-Being (6W-WeB) was developed. This measure captures both the specific actions individuals engage in as well as why they do so. Specifically, it assesses the typical ways in which an individual engages in six behaviors: *connecting with others*, *challenging oneself*, *giving to others*, *engaging in physical activity*, *embracing the moment*, and *caring for oneself*. For each of these behavior domains, the 6W-WeB assesses an individual's levels of satisfaction with their frequency of engagement as well as their autonomous and controlled motivation for doing so. It yields global scores for engagement, importance of activities, and pressure to engage in activities, as well as specific scores for each way to well-being. The measure has been validated in four independent samples, from two countries, with participants ranging in age from 11 to 65 years. The measure is best represented by a bifactor model which has been shown to be invariant across gender, age, country of sampling, and levels of psychological distress. The 6W-WeB is also linked in expected ways with measures of flourishing, psychological distress, experiential avoidance, and non-attachment. Additionally, known-groups validity tests demonstrated that the 6W-WeB can successfully differentiate between participants who meet criteria for high psychological distress and those who do not. The 6W-WeB measure can be a clinically relevant tool, helping practitioners identify the specific behavior domains that can promote their clients' value-consistent living.

Keywords

Well-being · Valued action · Behaviors · Acceptance and commitment therapy

Introduction

Well-being is defined as the "combination of feeling good and functioning effectively" (Huppert, 2009, p. 1). Having high levels of well-being has a range of benefits; people experiencing high levels of well-being are more motivated to engage in activities, explore their environment, and approach new goals (Lyubomirsky et al., 2005). They are also more likely to help others (Krueger et al., 2001), have a broader focus of attention (Fredrickson & Branigan, 2005), and be more productive (Oswald et al., 2015). In addition, research has shown well-being to be positively associated with cognitive functioning (Huppert, 2009), and negatively associated with frequency of treatment for psychiatric illness (Hamdan-Mansour & Marmash, 2007). Well-being also benefits physical health as it can positively impact immunological functioning, neuroendocrine regulation, while reducing cardiovascular risk (Ryff et al., 2004).

Given its significance, it is crucial to determine the predictors of well-being. The positive psychology literature has abundant theories and frameworks for understanding well-being and the factors that promote it. This chapter focuses on the behavioral

determinants of well-being. Focusing on behavior has the advantage of giving practitioners and clinicians a clear target for change (i.e., increasing valued behavior) as well as a clear way to measure change (e.g., frequency of valued behavior during the past week).

While research has shown certain personality traits (e.g., openness to experience; Keyes et al., 2002), life events (e.g., unemployment; Wood & Burchell, 2012), and genetic factors (e.g., 5-HTT gene; Kendler et al., 2005) predict well-being, these may be difficult to change through psychological interventions. In relation to personality traits, it is unclear how one would "improve" personality or even whether it is ethically appropriate to do so. For example, should individuals with high levels of introversion be made more extroverted, even if spending time alone can help them feel re-energized? Should those who score highly on neuroticism be made to never feel anxious and worried, even if what causes them to feel anxious is a source of value and meaning to them? Research, in fact, shows that some degree of worrying may be beneficial (e.g., by predicting longevity; Friedman & Martin, 2011). Similarly, life events are largely outside of our control, and while environmental and behavioral factors can transform the expression of genes, these changes are generally slow.

We might be tempted to directly target well-being (e.g., by teaching positive thinking or avoidance of negative thinking). However, direct attempts to alter well-being may sometimes be ineffective, and even counterproductive. This has largely been shown with the "feeling good" component of well-being. For instance, in an experimental study, Mauss et al. (2011) demonstrated that participants who were primed to value happiness showed fewer positive reactions to a happy film clip, compared to participants in the control group. They also showed more disappointment at their emotional state than participants in the control group. This contradictory finding may be because the goals people work toward often set a benchmark against which they evaluate their progress and achievements (Carver & Scheier, 2012). Thus, if an individual expects to feel happy, they may be disappointed when they do not feel that way (Gruber et al., 2011).

Similarly, studies have shown that direct attempts to avoid negative thoughts and mood states can increase the frequency of these internal states while also interfering with our functioning. For instance, in a classic experiment by Wegner et al. (1987), participants initially either completed a "thought suppression" phase where they were told to avoid thinking of a white bear or were not provided with any instructions about suppressing their thoughts. In the second phase of this study, participants were instructed to think about the white bear and report the frequency with which they did so. Results indicated that participants who were told not to think about the white bear reported greater frequency of thoughts about the white bear in this second phase, compared to participants who were not asked to suppress their thoughts. These findings may be explained by the amount of mental energy required to suppress thoughts or distract ourselves from negative internal experiences such as distress or self-doubt. Attempts to avoid internal experiences have been termed as experiential avoidance (EA; Hayes et al., 2011). Greater levels of EA have been linked to depression, anxiety, panic disorders, eating disorders, and lower levels of

well-being (Hayes et al., 2011). Thus, in addition to direct attempts to improve well-being being counterproductive, direct attempts to reduce ill-being can be harmful. Instead, indirectly increasing well-being through increasing behavioral engagement is a viable alternative.

Valued Action

Behavior-based interventions, such as Behavioral Activation (Kanter et al., 2010), Acceptance and Commitment Therapy (ACT; Hayes et al., 2011), and components of Cognitive Behavioral Therapy (CBT; Beck, 1993), aim to increase individuals' levels of engagement in meaningful behaviors (or valued action). For instance, ACT moves the focus of psychological interventions away from changing how people think and feel (i.e., the content of thoughts and feelings) to changing how they relate to those thoughts and feelings in service of engaging in behaviors that are important to them (i.e., the context of thoughts and feelings). The main aim of ACT is to improve individuals' psychological flexibility. That is, to encourage engagement with meaningful behaviors even when it may be difficult for individuals to do so.

ACT targets psychological flexibility through six core processes: acceptance, defusion, attention to the present moment, self-as-context, values, and committed action. Insight into these six processes is useful in gaining a deeper understanding of valued action. The first of these processes – acceptance – is the active process of paying attention to and being willing to engage with one's emotions and thoughts to observe the contents of the mind. The second process of defusion entails taking a step back from the contents of one's mind to notice them for what they are (i.e., thoughts), rather than what they say they are (i.e., the content of the thoughts). Third, attention to the present moment implies being psychologically present in the current moment and not reacting automatically to what is happening internally or externally. Fourth, self-as-context is the process of observing oneself from the perspective of I/here/now. These four processes help individuals recognize and come into contact with what they find most important in their lives (values). "Values are like a compass: they help people make good choices when experiencing difficult emotions" (Ciarrochi et al., 2022, p. 155). These processes also enable individuals to choose to engage in activities that are in accordance with their values, from moment-to-moment (committed action). Valued action, therefore, is the commitment to engage in behaviors that are important and meaningful to us.

Thus, in order to increase valued action, ACT helps individuals flexibly relate with their internal experiences, enables them to spend more time in contact with the present, and assists them to lead a more meaningful and value-consistent life, even in the face of difficulty (Hayes et al., 2011). Focusing on creating value-aligned behavior change can positively and practically promote mental health and well-being. ACT has been found to successfully treat a variety of mental health conditions such as anxiety, depression, psychosis, drug addiction, and trichotillomania (for an overview, see Hooper & Larsson, 2015).

Measuring Valued Action

Given the benefits of shifting focus away from internal states to the behaviors that people find meaningful, it is important for questionnaires used in behavior-focused interventions to also measure behavior. Only using questionnaires that assess internal states can misfocus individuals by creating a mismatch between the core message of behavior-based interventions and these measures. Doing so can also detract from the importance placed on valued action.

A handful of valued action questionnaires exist. For example, the Valued Living Questionnaire assesses value importance and value-concordant living in ten life domains: family, marriage, parenting, friendship, work, education, recreation, spirituality, citizenship, and physical self-care (Wilson et al., 2010). The scale assesses valued living in two ways. First, value importance is measured through ratings of each domain on a 10-point Likert scale ranging from 1 (*not at all important*) to 10 (*extremely important*). Second, the extent to which individuals act in accordance with their values for each of the 10 domains is measured using another 10-point Likert scale ranging from 1 (*not at all consistent*) to 10 (*extremely consistent*). These two sets of items are then combined into a composite score that is averaged across all ten domains.

The Valued Living Questionnaire is an important tool in determining the extent of individuals' valued action. However, it does not provide information about the specific behaviors that people find meaningful. That is, it does not determine how people put their values into action in their everyday lives. There is a need for a single questionnaire to comprehensively assess both the specific behaviors that people engage in to live in accordance with their values, as well as why they engage in these activities. The Six Ways to Well-Being (6W-WeB) was developed to bridge this gap (Basarkod, 2019).

The Six Ways to Well-Being

The purpose of developing the 6W-WeB was to prompt individuals to think of all the ways, or behaviors, that may drive their well-being. To construct a measure that would comprehensively assess these behaviors, Basarkod (2019) built on work by the New Economics Foundation (NEF). The NEF is an independent think-and-do tank who were commissioned by the United Kingdom government in 2008 to review the literature and identify the behaviors that promote well-being at the individual level. This process involved a desk-review of key well-being reports, a literature review of the evidence from positive psychology, and interviews with experts. Based on this evidence, the NEF created a list of all the behaviors that promote well-being. They were instructed to create a behavioral equivalent to the "five serves of fruit and vegetables a day" for physical health. Thus, they picked the five most important behaviors and named them "the five ways to well-being". These behaviors were: connect (engaging in social relationships), keep learning (learning new things), give (giving or doing something kind for others), be active (engaging in physical activity), and take notice (being mindful and present in the moment; Aked et al., 2008).

The five ways to well-being framework has gained popularity since its inception. Just in the 3 years since the release of the report, the five ways to well-being framework was applied 76 times within the UK (Aked & Thompson, 2011). For example, The Children's Society collaborated with the NEF to explore the frequency of engagement in the five actions by 1500 children aged 10–15. They found that greater engagement in these activities was indeed associated with greater subjective well-being in this sample (Abdallah et al., 2014).

As mentioned, the NEF were instructed to restrict their recommended behaviors to five. Thus, it is likely that there are other behaviors that are equally important for people's well-being. Indeed, there is overwhelming support in the literature for the importance of self-care behaviors (Christensen, 2001; Ciarrochi et al., 2015; Haack & Mullington, 2005). These include actions such as getting good quality sleep, maintaining a healthy diet, and taking medications as required. Self-care was added to the framework by Basarkod (2019), who labeled these as the Six Ways to Well-Being. The next section briefly reviews the evidence for the six behaviors in relation to their links with mental health and well-being (see Basarkod, 2019 for a more thorough overview).

The Six Behaviors Relevant for Well-Being

Connecting with Others Having healthy social relationships is the most consistent predictor of well-being for people of all ages and across cultures (Chu et al., 2010; Ertel et al., 2009; Rowe & Kahn, 1998). Such relationships can increase our sense of meaning and purpose, while also providing us with love, intimacy, support, and reassurance of worth. The lack of healthy relationships predicts mental-ill health (Brugha et al., 2005), depression, anxiety, and loneliness (Cohen & Syme, 1985; Rowe & Kahn, 1998). In fact, research shows that a primary social network of less than three people predicts mental ill-health in the future, even after controlling for previous mental health disorders (Brugha et al., 2005). The absence of good quality relationships is associated with depression, anxiety, and loneliness (Rowe & Kahn, 1998).

Challenging Oneself Basarkod (2019) expanded on NEF's category of "keep learning" to *challenging oneself*, as challenging behaviors positively predict well-being while also substantially overlapping with learning behaviors. Challenging oneself and learning new things are associated with greater social and cognitive development, emotional health, self-esteem, resilience, optimism, and life satisfaction (Feinstein & Hammond, 2004). In addition, a lack of challenge is linked to boredom, which in turn is associated with job dissatisfaction, anxiety, aggression, pathological gambling, and eating disorders (see Van Tilburg & Igou, 2012). Feinstein and Hammond (2004) demonstrated that, in addition to an increased probability of giving up smoking and taking up exercise, individuals who participated in learning courses between the ages of 33 and 42 also offset the decline in life satisfaction by 35%, compared to individuals who did not take up any course. The evidence for the benefits of challenging oneself also comes from the literature on flow – the state of being completely absorbed by and losing oneself in the current

activity (Csikszentmihalyi, 1997). This usually occurs when there is a balance between one's perceived skill and the difficulty of the task. The state of being in flow is associated with positive affect, happiness, and meaning, along with lower levels of anxiety (for an overview, see Nakamura & Csikszentmihalyi, 2009). Thus, in addition to simply learning new things, it is important that individuals feel challenged to the right extent.

Giving to Others Engaging in helping behaviors is not only useful for the recipient of the action, but also for the doer (Weinstein & Ryan, 2010). Individuals who engage in giving behaviors (e.g., volunteering, donating money, or buying coffee for an acquaintance) show greater levels of happiness (Krueger et al., 2001), positive affect (Lyubomirsky et al., 2004), mental health (Schwartz et al., 2003), and self-esteem (Brown et al., 2012). An experimental study by Dunn et al. (2008) showed that people who were instructed to spend money on others reported feeling happier than those instructed to spend money on themselves. Similarly, a cross-national study using samples from Canada, Uganda, South Africa, and India found that prosocial spending promoted happiness and life satisfaction (Aknin et al., 2013). These increases were maintained even when the giver was not aware of who the receiver was and when no one knew about the giver's actions. Thus, the well-being benefits of giving to others are over and above those of social interaction and positive judgements by others.

Engaging in Physical Activity Being physically active has been linked consistently with reductions in mental ill-health and with improvements in well-being (Biddle & Asare, 2011). People show higher levels of life satisfaction on days they exercise compared to days they do not (Maher et al., 2013). Evidence from randomized controlled trials and longitudinal studies in samples of children and adolescents have demonstrated that engaging in exercise can reduce depression and anxiety symptoms as well as the likelihood of developing new symptoms (Larun et al., 2006; McPhie & Rawana, 2015). In contrast, children who engage more in sedentary behaviors are more likely to exhibit anxiety disorders (Teychenne et al., 2015). Similarly, active adults report fewer anxiety symptoms than inactive adults (Taylor, 2003).

Embracing the Moment The NEF defined taking notice as an increased awareness of, and engagement with, one's surroundings. Basarkod (2019) likened this domain to mindfulness, which is commonly defined as "bringing one's complete attention to the present experience on a moment-to-moment basis" (Marlatt & Kristeller, 1999, p. 68), in a way that is accepting, non-judgmental, and allowing of all experiences (Brown & Ryan, 2003). Being mindful is linked to greater stress reactivity, life satisfaction, self-esteem, pleasant affect, emotional and behavioral regulation, and heightened self-knowledge (Brown & Ryan, 2003). Higher levels of trait mindfulness have also been linked with lower levels of rumination (Raes & Williams, 2010), depression, social anxiety (Brown & Ryan, 2003), fewer emotional regulation difficulties (Baer et al., 2006), and less frequent automatic thoughts (Frewen et al., 2008).

Caring for Oneself This category of self-care behaviors includes activities that are intended to directly promote one's physical and mental health. In practical terms, such activities would include getting good quality sleep, eating healthy food, and eating in moderation (Ciarrochi et al., 2015). Self-care activities are associated with better mental health, well-being, and mood (Lansdowne & Provost, 1998), and lower levels of depression (Tolmunen et al., 2003), anxiety, and antisocial behavior (Hakkarainen et al., 2004; Liu & Zhou, 2002). The specific self-care behavior of eating well is associated with lower levels of depression (Firth et al., 2019) and better mood (Firth et al., 2020). Similarly, getting good quality sleep is positively associated with optimism (National Sleep Foundation, 2002), quality of life, and well-being (Jean-Louis et al., 2000).

Basarkod (2019) argued that the above-mentioned six domains of behavior were important for well-being and should be measured in a single questionnaire for a comprehensive assessment of value-consistent behaviors. However, Basarkod also argued that it was not enough for individuals to simply engage in these behaviors, but their motivations for engaging in them also played an important role in determining the well-being benefits of these actions. This statement was supported by literature on self-determination theory (SDT; Ryan & Deci, 2017).

Motivation for Engaging in the Six Behaviors

SDT is one of the leading theories of human motivation (Ryan & Deci, 2017). It is concerned with the reasons behind the choices people make. At its very core, SDT differentiates between autonomous and controlled reasons for engaging in activities. While autonomous motivation involves engaging in an action because it is personally meaningful and important to us, controlled motivation is characterized by a sense of felt pressure or coercion to engage in the activity.

Autonomous motivation reflects a sense of agency and volition; the decision to engage in the action emerges from within the individual (Deci & Ryan, 2008). These actions tend to be consistent with the individual's values and are integrated with their sense of self (Ryan & Deci, 2017). Autonomously motivated actions are associated with greater levels of subjective vitality and mental health (Deci & Ryan, 2008). Individuals are also more likely to persist with actions that are autonomously motivated (Deci & Ryan, 2008). In contrast, engaging in an activity because of controlled motivation is accompanied by pressure to think, feel, or behave in certain ways that are not self-endorsed. Engaging in controlled behaviors is often accompanied by intrapersonal conflict (Sheldon & Houser-Marko, 2001) and tends to deplete the individual's energy levels (Moller et al., 2006). Importantly, such behaviors do not promote mental health and may, in fact, cause the individual's mental health to deteriorate (Deci & Ryan, 2008). Engaging in activity because of controlled reasons is also associated with neuroticism (Veage et al., 2011), depressive symptoms (Rouse et al., 2011), and reduced vitality (Edmunds et al., 2007). In addition, individuals are less likely to persist with controlled behaviors, compared with autonomously motivated behaviors (Deci & Ryan, 2008).

Indeed, there is evidence to suggest that the type of motivation plays a role in determining the well-being outcomes for all six ways to well-being. For instance, autonomously engaging in social relationships is associated with higher levels of

love, affection, and happiness (Patrick et al., 2007), while relationships that involve control reduce well-being (Finch et al., 1999). Similarly, opportunities to participate in active learning reduce stress compared to when individuals have no choice (Whitman et al., 1986). Autonomous engagement in helping behaviors increases well-being (Weinstein & Ryan, 2010), while engaging in such behaviors for controlled reasons can lead to depression, stress, and burn-out (Pinquart & Sörensen, 2003). Physical activity undertaken during one's free time is positively associated with well-being, while engaging in non-autonomous physical activity (e.g., household tasks that are viewed as obligatory) is associated with increased depression and reduced well-being (Kull et al., 2012). A meta-analysis showed that mindfulness is positively associated with autonomous (or intrinsic) motivation and negatively associated with controlled (or extrinsic) forms of motivation (Donald et al., 2020). Further, the more extreme the type of motivation, the stronger the correlation with mindfulness. Thus, mindfulness activities are usually engaged in because of autonomous motivation and are positively associated with well-being. With regard to self-care behaviors, individuals who are autonomously motivated show better treatment adherence and outcomes for diet and health interventions than those who are motivated by controlled reasons (Pelletier & Dion, 2007; Zeldman et al., 2004).

In light of the evidence on SDT, the 6W-WeB assessed not only the typical ways in which individuals engage in the six behavior domains, but also the extent to which they do so for autonomous and controlled reasons. It is important to note here, that autonomous and controlled motivation are not two ends of a continuum. Rather, they are related but distinct constructs (Duineveld et al., 2022). That is, while high autonomous motivation for an action is usually accompanied by low levels of controlled motivation, it is possible for an individual to have high or low levels of both concurrently. Thus, Basarkod (2019) measured these two constructs independently. The 6W-WeB is described in detail in the next section.

The Six Ways to Well-Being (6W-WeB) Measure

The 6W-WeB measures the frequency of and the motivation for engaging in the six behavior domains mentioned above. For each behavior, respondents are requested to write two typical ways in which they engaged in that behavior over the last month. They are provided with a description and some examples to help clarify what each behavior domain implies. For each of their written behaviors, respondents are required to rate (i) the extent to which they feel satisfied with the frequency of engaging in that behavior ("I am satisfied with how frequently I do this"); (ii) the extent to which they engage in that behavior because they find it personally meaningful and enjoyable ("This is personally important or enjoyable. I do it because I want to do it"); and (iii) the extent to which they engage in that behavior because they feel like they have to ("I feel pressured to do this. E.g., from others or from a sense of guilt"). Each of these are to be rated on a scale of 1 (*strongly disagree*) to 6 (*strongly agree*). The full measure is presented in Appendix A (Basarkod, 2019; Basarkod et al., 2019).

Basarkod (2019) also included an "other" category for respondents to write any additional actions that they engaged in which did not fit into the six categories. The rationale for this was to avoid excluding any behaviors deemed important based on an individual's own sense of what is relevant for their well-being. It was also to make sure that the questionnaire was not restricted by culture and context. Although research suggests that the six behaviors are important for well-being across countries, the "other" category makes sure that any culturally-dependent important behaviors are also captured.

The 6W-WeB was written in simple English and has a Flesch-Kincaid Grade Level (an index based on the number of syllables per word and the number of words per sentence) score of 6.1. Thus, the questionnaire is easy to understand and can be used with samples who have a reading ability equivalent to sixth grade students in the USA, and above.

Psychometric Properties of the 6W-WeB

This section outlines the validation and psychometric properties of the 6W-WeB. While technically oriented, it highlights how the different items of the questionnaire are best combined together to form meaningful scores and how these scores link with theoretically-relevant constructs. An understanding of the scale's psychometric properties helps inform how the 6W-WeB can be used by researchers, practitioners, and the general public (discussed in the next sections). Basarkod's (2019; also see Basarkod et al., 2019) validation process involved the following studies and samples: (i) Study 1 was conducted on a sample of 1800 individuals from the general population in the United States of America; (ii) Study 2 used a sample of 865 individuals from the general population in Australia; (iii) Study 3A comprised a convenience adolescent sample from an all-girls school in Australia; (iv) Study 3B included an adolescent sample from the general population in Australia; and (v) Study 4 combined all these samples to maximize the sample size and power for analyses that were more computationally demanding. Table 1 presents an overview of these samples.

Factor Structure

Confirmatory Factor Analysis

The primary aim of the factor structure analysis was to establish how best to combine the different items of the scale to create meaningful scores. To do so, Basarkod (2019) first conducted a series of confirmatory factor analysis (CFA) models in Study 1. Results showed that the questionnaire was best represented by a bifactor model with three global factors and six domain factors. In a bifactor model, each manifest item (i.e., the items of the questionnaire that participants respond to) loads onto two factors – one global and one domain. The global factors represent the three rating scales of frequency, autonomous motivation, and controlled motivation. Basarkod

Table 1 Descriptive information for studies from Basarkod (2019) and Basarkod et al. (2019)

	Study 1	Study 2	Study 3A	Study 3B	Study 4
Total N	1800	855	518	185	3358
Age (M [SD], range)	40.9 (13.2), 18–65	38.2 (13.4), 18–65	14.3 (1.5), 12–17	19.6 (0.7), 15–21	34.9 (15.5), 12–65
Gender (% female)	60.3	47.3	100	51.38	63.16
Ethnicity (%)					
Caucasians	66.9	74			
African American	10.2	–			
Hispanic	10.2	–			
Asian	–	15.9			
Indigenous Australians/ New Zealanders	–	2.7			
Other	12.8	7.4			
Income (%)	(USD)	(AUD)			
<20,000	18.6	8.9			
20,001–60,000	46	35.9			
60,001–100,000	24.2	31.9			
>100,000	11.1	23.3			
Other	0.2	–			
Education (%)					
High school	24.2	33.1	0		
College diploma	58	32.3	0		
Graduate degree	17.8	34.6	0		

Note. Blank spaces indicate unknown values

(2019) labeled these as behavior *engagement*, *activity importance*, and *activity pressure*, respectively. As an example of these global factors, the *behavior engagement* factor comprised all the items assessing satisfaction with frequency across the six behaviors. The domain factors represent the six behavior domains of *connecting with others*, *challenging oneself*, *giving to others*, *engaging in physical activity*, *embracing the moment*, and *caring for oneself*. As an example of a domain factor, the three rating scales of frequency, autonomous motivation, and controlled motivation for connecting with others all loaded onto the *connecting with others* domain factor. The three global factors were correlated with each other (e.g., *behavior engagement* and *activity importance*), and the six global factors were correlated with each other (e.g., *connecting with others* and *challenging oneself*). The correlations between the global and domain factors (e.g., between *behavior engagement* and *connecting with others*) were constrained to be zero. The fit indices of this bifactor model were satisfactory: χ^2 (540) = 2741.77, $p < 0.001$, CFI = 0.91, TLI = 0.89, RMSEA [90% CI] = 0.048 [0.046 0.049]).

In addition, Basarkod (2019) included correlated residuals between the activity pressure items within each behavior domain. That is, the correlations between the items measuring controlled motivation for the two examples for a given domain were also estimated (e.g., correlation between the two controlled motivation items for

connecting with others). This was included in the model after an examination of model modification indices, which show sources of misspecification in a measurement model. Basarkod (2019) examined the top 20 largest modification indices, within which the residual covariances for five out of the six behavioral domains were included. This implies that pressure is pervasive across items within a domain, e.g., pressure felt for one instance of *embracing the moment*, is also felt for a second instance of *embracing the moment*. Prior evidence also supports the pervasiveness of felt pressure within life domains (Ciarrochi & Bailey, 2008). The addition of these correlated residuals improved the fit of the model: χ^2 (534) = 2344.01, $p < 0.001$ CFI = 0.93, TLI = 0.91, RMSEA = 0.043, 90% CI [0.042 0.045]. The diagrammatic representation of the final model is presented in Fig. 1 (Basarkod, 2019; Basarkod et al., 2019).

Basarkod (2019) then used Studies 2, 3A, and 4 to replicate the factor structure of the 6W-WeB (the factor structure was not tested in Study 3B due to a lack of power given the small sample size). The fit of the final bifactor model from Study 1 showed good fit in the other samples as well: Study 2: χ^2 (534) = 1399.92, $p < 0.001$, CFI = 0.93, TLI = 0.91, RMSEA = 0.044, 90% CI [0.041 0.046]. Study 3A: χ^2 (534) = 1034.44, $p < 0.001$, CFI = 0.91, TLI = 0.90, RMSEA = 0.043, 90% CI [0.039 0.046]. Study 4: χ^2 (534) = 3932.47, $p < 0.001$, CFI = 0.92, TLI = 0.91, RMSEA = 0.044, 90% CI [0.042 0.045].

Factor Loadings

Basarkod (2019) utilized the combined sample in Study 4 to evaluate the factor loadings of the 6W-WeB items in the bifactor model. Overall, results showed that the item loadings for the three global factors were all positive. For the domain factors,

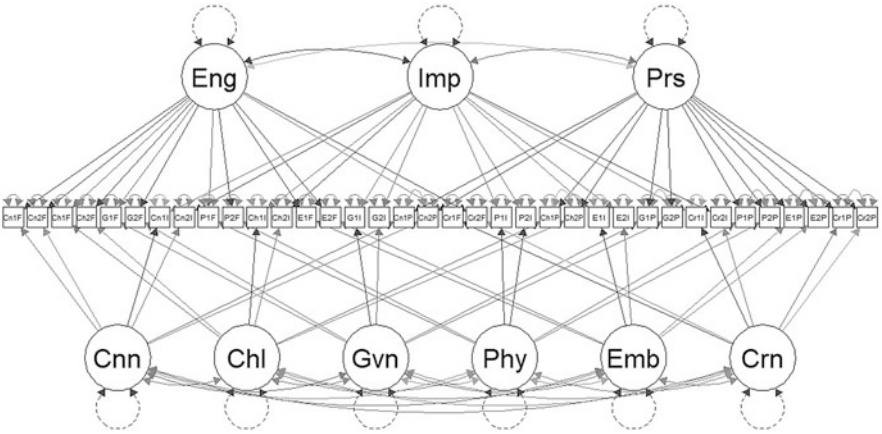

Fig. 1 Bifactor model of the Six Ways to Well-Being (Basarkod, 2019; Basarkod et al., 2019). *Note*. *Eng* = behavior engagement; *Imp* = activity importance; *Prs* = activity pressure; *Cnn* = connecting with others; *Chl* = challenging oneself; *Gvn* = giving to others; *Phy* = engaging in physical activity; *Emb* = embracing the moment; *Crn* = caring for oneself

the item loadings of the frequency and autonomous motivation items were positive, while the loadings of the controlled motivation items on the six domains were negative.

In terms of the magnitude of the factor loadings, the loadings for the *behavior engagement* factor ranged from 0.49 to 0.67, the loadings for the *activity importance* factor ranged from 0.44 to 0.62, and those for the *activity pressure* factor ranged from 0.70 to 0.76. The absolute loadings (i.e., not accounting for the negative valence of pressure items) for the six domain factors ranged from 0.19 to 0.72 for *connecting with others*, 0.17 to 0.73 for *challenging oneself*, 0.25 to 0.67 for *giving to others*, 0.19 to 0.67 for *engaging in physical activity*, 0.20 to 0.68 for *embracing the moment* and 0.15 to 0.69 for *caring for oneself*. It is evident that the factor loadings for the behavior domains varied considerably. The lowest loadings were for the pressure items on the six domains, and especially for the second example within each of the behaviors (e.g., the first pressure item had a loading of −0.33 on *connecting with others* and the second pressure item had a loading of −0.19). This is unsurprising given that the highest loadings for the global factors were for the pressure items on *activity pressure*. This also provides further evidence for the pervasiveness of felt pressure to engage in activities. In addition, it is important to note that as this is a bifactor model, the factor loadings of the items on the specific factors are usually smaller than those of the items on the global factors. This is because global factor partials out what is common among all items that load onto it. Thus, the variance explained by the domain factors is only that which is not explained by the global factors.

Measurement Invariance

Measurement invariance assesses whether the scale measures the same construct across all groups. That is, whether the items mean the same thing to members of different subgroups (Cheung & Rensvold, 2002). If a given model is invariant across subgroups, comparisons across people can be made with greater confidence. The measurement invariance of the final bifactor model of the 6W-WeB was evaluated using the combined sample in Study 4. Invariance was tested across country of sample, age, gender, and level of psychological distress. The combined sample was split in the following ways. Countries: sample whose data were collected in the US ($n = 1800$) and those whose data were collected in Australia ($n = 1558$); age: participants between the ages of 12 and 38 ($n = 2035$) and those between the ages of 39 and 65 ($n = 1322$); gender: female ($n = 2121$) and male ($n = 1234$); levels of psychological distress: participants who did not meet criteria for psychological distress (GHQ score ≤ 11; $n = 1009$) and those who did (GHQ score ≥ 12; $n = 1293$).

Invariance was tested at five levels. The first is a configural invariance model which tests the same underlying measurement structure in both groups, but all parameters are free to vary across the groups. Invariance at this level indicates that the different subgroups equate the same subset of manifest items with the same latent constructs. The second is a metric invariance model that holds factor loadings constant across groups. Invariance at this level indicates that the different subgroups attribute the same meaning to the latent constructs. The third is a scalar invariance model that holds both factor loadings and intercepts constant across groups, and

implies that the different subgroups of people have the same scores on manifest items if their scores on the latent constructs are the same. The fourth is a residual invariance model that hold factor loadings, intercepts, and residuals equal across groups. This indicates that each subgroup has equivalent residual errors in the model. The fifth is a means invariance model that holds factor loadings, intercepts, residuals and means equal across groups. This final level of invariance indicates that subgroups have the same mean levels for each latent construct.

A model is said to be invariant across subgroups if its fit indices do not change as more restraints are added to the model. Results showed that, for the comparisons between countries, age groups, and gender, the fit indices of the 6W-WeB bifactor measurement model remained stable with the addition of each constraint. While this model was invariant across levels of psychological distress at the configural, metric, and scalar levels, the fit of the residuals and means invariance models were not adequate. That is, the CFI for the residual invariance model increased by more than 0.01 compared to the scalar invariance model (Cheung & Rensvold, 2002). However, the residuals and means invariance models are rarely achieved in practice (Bialosiewicz et al., 2013). Thus, achieving scalar invariance is usually enough to conclude that a measurement model is invariant across groups. The results of Basarkod (2019), therefore, implied that the 6W-WeB questionnaire is interpreted in a conceptually similar manner by participants across different subgroups, allowing for appropriate comparisons of 6W-WeB scores across these subgroups.

The evidence presented thus far suggests that the 6W-WeB is best represented by a bifactor model with three global factors (*behavior engagement*, *activity importance*, and *activity pressure)* and six domain factors (*connecting with others*, *challenging oneself*, *giving to others*, *engaging in physical activity*, *embracing the moment*, and *caring for oneself)*. This model performs well under a series of tests. However, bifactor models are difficult to interpret, owing to the variance in each item being partialed out between two factors. Thus, Basarkod (2019) used the bifactor model largely as an indicator of the structure of the 6W-WeB. That is, for further analyses using the 6W-WeB, Basarkod suggested calculating simple scale scores for each of the nine scales, rather than utilizing factor scores from the bifactor model. That is, while each item still contributes to the calculation of two scale scores (one global and one domain), the variance in the items is not partialed out between the two scales. In other words, each item contributes to both relevant scales in its entirety. Doing so greatly eases the use of the questionnaire and the interpretability of the results using it. The results presented in the rest of this chapter utilize these scale scores (please see section on Utilizing the Six Ways to Well-Being for a detailed description of how the questionnaire is to be scored).

Reliability Indices

To evaluate the reliability of the different 6W-WeB scales, Basarkod (2019) presented alpha reliability estimates for each of the nine scales in all studies. The alpha coefficient indicates how closely related a set of items are as a group (internal consistency). These were calculated by taking into account all items within a particular factor. That is, these reliability estimates ignored the bifactor structure in that they fully accounted for the variance in the items that loaded onto a latent factor.

These estimates do not partial out the item variance accounted for by the other latent factor the items load onto. Results showed that the alpha estimates were acceptable for all scales, in all studies. They were slightly higher for the global scales (α range: 0.81–0.94) than for the domain scales (0.72–0.82), with the highest reliability estimates for the *activity pressure* scale (0.87–0.84).

Known-Groups Validity

For a measure to be clinically relevant, it is useful for it to be able to discriminate between clinical and non-clinical populations. Basarkod (2019) tested whether the 6W-WeB could differentiate between people in relation to their levels of reported psychological distress. Psychological distress was measured using the 12-item version of the General Health Questionnaire (GHQ-12; Goldberg, 1992). The GHQ-12 has previously been used to determine the presence of psychological distress, where scores above a certain threshold are indicative of individuals likely to meet criteria for a DSM-V diagnosis (Baksheev et al., 2011; Gureje & Obikoya, 1990; Sheppard et al., 2018). It has also been validated against the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders-IV-Test Revision (First et al., 1997), indicating that it can identify cases of individuals who meet criteria for psychological distress. Basarkod (2019) used a cut-off score of 11/12 due to its balance between specificity and sensitivity (Donath, 2001).

Known-groups validity was examined in Studies 1 and 2. Specifically, Basarkod (2019) tested differences between participants who did not meet criteria for psychological distress (GHQ score $\leq$ 11) and those who did (GHQ score $\geq$ 12). These differences were in terms of standardized scores on the three global scales of *behavior engagement*, *activity importance*, and *activity pressure*, as well as on the six domain scales of *connecting with others*, *challenging oneself*, *giving to others*, *engaging in physical activity*, *embracing the moment*, and *caring for oneself*.

Results were consistent across the two studies. Specifically, participants who met criteria for psychological distress had significantly lower levels of *behavior engagement* and *activity importance*, and significantly higher levels of *activity pressure*, compared to participants who did not meet criteria for psychological distress. In addition, the former group also had significantly lower scores on the six behavior domains compared to the latter group. Thus, individuals who are less satisfied with the frequency of valued action, engage in behaviors for controlled rather than autonomous reasons, and have lower levels of "autonomous engagement" – the term Basarkod (2019) used for high scores on the domain factors – in the six behaviors, are more likely to meet criteria for psychological distress, compared to individuals who show the opposite pattern.

Correlations with Theoretically-Relevant Variables

While the 6W-WeB was shown to differentiate between individuals who met psychological distress criteria and those who did not, it is also important to know

if and how the nine subscales of the 6W-WeB are associated with well-being and other relevant constructs. As previously mentioned, the scale was developed to help practitioners and clinicians target well-being indirectly through behavior-focused interventions. Thus, for the 6W-WeB to be useful in relation to well-being, it is important that its scores are, in fact, linked with well-being and other clinically useful constructs.

Basarkod (2019) assessed this through a series of zero-order correlations with the theoretically-relevant variables of flourishing, psychological distress, experiential avoidance, and nonattachment. In addition, she also conducted multiple regressions to assess the extent to which the 6W-WeB subscales predicted flourishing and psychological distress.

Flourishing

Basarkod (2019) measured flourishing using Keyes' (2006) questionnaire in Studies 1, 2, 3A, and 3B. This measure consists of three subscales of emotional, psychological, and social flourishing. *Behavior engagement* had positive correlations with all three subscales (r range = 0.38 to 0.54). Similarly, a*ctivity importance* had positive correlations with all three subscales (0.27 to 0.48), while a*ctivity pressure* had negative correlations with emotional (−0.11 to −0.28) and psychological flourishing (−0.14 to −0.24). All six behaviors had positive correlations with the three flourishing subscales, in all studies (0.09 to 0.46).

In terms of the regressions, when the six domains were simultaneously included in the regression model, *challenging oneself* and *engaging in physical activity* positively and significantly predicted the three flourishing subscales. That is, these two domains predicted flourishing over and above what could be explained by the other four domains and each other. In addition, in Study 2, *connecting with others* was also a significant positive predictor of the three subscales, while *embracing the moment* also significantly predicted social flourishing. In Study 3A, *connecting with others* was also a significant predictor of psychological and social flourishing.

Basarkod (2019) also examined the total amount of variance the bifactor model of the 6W-WeB explained in the three flourishing subscales, using structural equation models. Findings showed that the bifactor model of the 6W-WeB explained 23–24% of the variance in emotional flourishing, 29–32% of the variance in psychological flourishing, 22–24% of the variance in social flourishing. Thus, all in all, Basarkod (2019) demonstrated that the six behavior domains are indeed linked to flourishing and account for a substantial proportion of the variance in this construct.

Psychological Distress

Basarkod (2019) measured psychological distress with the GHQ-12 (Goldberg, 1992), in Studies 1, 2, and 3B. In all three studies, *Behavior engagement* had negative correlations with psychological distress (−0.31 to −0.42). *Activity importance* had negative correlations (−0.27 to −0.31), while *activity pressure* had positive correlations with psychological distress (0.20 to 0.32). All six behaviors had negative correlations with psychological distress (−0.25 to −0.42). In the regression models, the domains of *connecting with others*, *challenging oneself*, *engaging in physical activity*, and *caring for oneself* were negative and significant predictors of

psychological distress in Study 1. This pattern was largely the same for Study 2, except that the negative effect of *connecting with others* was nonsignificant. In terms of the variance explained, the bifactor model of the 6W-WeB explained 21–22% of the variance in psychological distress. Thus, the 6W-WeB was also associated with psychological distress in expected ways, that is, in the opposite pattern as associations with flourishing. Specifically, greater satisfaction with frequency of behavior engagement, autonomous motivation, levels of autonomous engagement, and lower levels of controlled motivation, were linked with lower psychological distress.

Experiential Avoidance

The Multidimensional Experiential Avoidance Questionnaire – 30 (MEAQ-30; Sahdra et al., 2016) was used to measure EA in Study 1. It consists of six subscales of avoidance: behavioral avoidance, distress aversion, distraction and suppression, repression/denial, procrastination, and distress endurance. Higher scores on each of the subscales are indicative of higher levels of that avoidance style, except for the subscale of distress endurance where higher scores indicate greater approach rather than avoidance. The subscales of behavioral avoidance and distress endurance are of particular relevance to ACT, and are the focus here. These subscales are concerned with engagement in (or the avoidance of engagement in) something of importance. While behavioral avoidance assesses the extent to which individuals avoid valued action in the face of distress, distress endurance measures their willingness to engage in valued action in the face of such distress (Gámez et al., 2011).

Behavior engagement and *activity importance* were uncorrelated with behavioral avoidance, while *activity pressure* had a positive correlation with it (0.31). In contrast, *behavior engagement* and *activity importance* were positively correlated with distress endurance (0.40 and 0.39, respectively), while *activity pressure* had a negative correlation with this subscale (−0.24). All six behaviors had negative correlations with behavior avoidance (−0.15 [*connecting with others* and *engaging in physical activity*] to −0.20 [embracing the moment]), and positive correlations with distress endurance (0.31 [*caring for oneself*] to 0.41 [*challenging oneself*]).

These correlations may signify that individuals who engage in behaviors because of controlled motivation may be more likely to avoid engaging in meaningful activity. In contrast, individuals engaging in behaviors because of autonomous reasons are more likely to endure distress in the service of their values. Similarly, individuals who engage more in the six behavior domains may be less likely to avoid distressing thoughts and endure distress to engage in valued action.

Nonattachment

This construct signifies an individual's ability to let go of, and not cling on to, positive states and events (Sahdra et al., 2010). Nonattachment can enable individuals to increase their autonomous engagement in valued action. Basarkod (2019) measured this construct using the 7-item short form of the Nonattachment Scale (NAS-7; Elphinstone et al., 2015; Sahdra et al., 2015).

Behavioral engagement and *activity importance* had positive correlations with nonattachment (0.43 and 0.50, respectively), while *activity pressure* had a negative correlation with it (−0.24). All six behaviors had positive correlations with nonattachment (0.33

[*engaging in physical activity*] to 0.44 [*connecting with others*]). This pattern of correlations suggests that individuals who do not cling to positive experiences may have greater levels of engagement in the six behaviors and do so because of autonomous rather than controlled reasons. Further, such individuals may also be satisfied with the extent to which they engage in each of the six behavioral domains.

Correlations with Criterion Variables Related to Each of the Six Domains

In addition to the above, Basarkod (2019) also assessed correlations with constructs that were theoretically close to each of the six ways in Study 3B. That is, each criterion variable (or "proxy" measure) mapped onto one of the six domains of valued activity. The UCLA Loneliness Scale – 8 (Hays & DiMatteo, 1987) was selected to map onto *connecting with others*. This scale measures the extent to which individuals feel they have social relationships. Indeed, it had the strongest negative correlation with *connecting with others* (−0.37) compared to the other five domains (−0.27 to −0.36).

The Revised Achievement Motives Scale (Lang & Fries, 2006) was selected to map onto *challenging oneself*. It measures individuals' levels of hope for success and fear of failure for academic achievement. The hope for success scale showed a positive correlation with *challenging oneself* (0.31), while the fear of failure scale had a negative correlation (−0.28). However, correlations of a larger magnitude were seen between the hope for success scale and *connecting with others* (0.35) and between the fear of failure subscale and *engaging in physical activity* (−0.31).

Attitude toward Helping Others (Webb et al., 2000) was selected for *giving to others*. This questionnaire assesses the extent to which individuals think other people should be helped. These two variables had a positive correlation (0.19), though a stronger correlation was seen for *embracing the moment* (the other domains were uncorrelated with Attitude toward Helping Others).

Godin's Leisure Time Activity questionnaire (Godin & Shephard, 1997) was chosen for *engaging in physical activity*. It assesses individuals' engagement in exercise over a 7-day period, specifically during their free time. This construct had the largest correlation with the *engaging in physical activity* domain (0.36) compared to the other five domains (0.17 to 0.26; *embracing the moment* was non-significant).

The Mindful Attention and Awareness Scale (MAAS; Brown and Ryan, 2003) measures dispositional mindfulness and was chosen to be the proxy measure for *embracing the moment.* While these two constructs were positively correlated (0.19), the correlations with other five domains were slightly larger (0.20 to 0.26).

Lastly, the Healthy Well-Being Experience Scale (Miller, 2005) was selected for *caring for oneself*. It assesses the extent to which individuals engage in healthy sleeping, eating, and exercising behaviors. *Caring for oneself* had the strongest correlations with the subscales of sleep (0.29) and eating (0.38), while *engaging in physical activity* had the strongest correlation with the eating (0.38) and exercise subscales (0.62).

Overall, results demonstrate that each domain was correlated with its relevant criterion measure. Thus, this implies that the six domains were indeed measuring what they intended to measure. However, the proxy measures were also correlated

with the other domains, which may have been because the proxy measures used were approximations of the constructs captured by the domain factors, rather than exact replications. For example, the MAAS was correlated with all six domains, which may imply that people can be mindful regardless of the actions they engage in. It is important to bear in mind, however, that the MAAS has been criticized as a measure of mindfulness. As all the items in this scale are negatively worded, the MAAS has been described as a measure of mindlessness, which may not be empirically equivalent to mindfulness (Grossman, 2008; Höfling et al., 2011).

Typical Ways in Which People Engage in the Six Behaviors

While beyond the scope of the current chapter, we briefly note here that the idiographic responses to the 6W-WeB were also examined in past research, through word frequency tabulation (Basarkod, 2019; Basarkod et al., 2019). This method enables the examination of the most common ways in which people engage in the six domains of valued action.

For *connecting with others*, individuals frequently engaged in interactions with their friends and family, through conversations, phones, and social media. Individuals engaged in *challenging oneself* behaviors through learning, cooking, reading, or working. Participants seemed to engage in *giving to others* by donating, volunteering, or helping a friend. Many participants were *engaging in physical activity* through walking, going to the gym, running, or playing a sport. For *embracing the moment*, participants reported that they pay attention to and enjoy the moment or watch something. Participants engaged in *caring for oneself* activities by maintaining a healthy diet, getting enough sleep, or relaxing.

In addition, Basarkod (2019) also examined the idiographic responses to the "other" category. Participants tended to report behaviors that were already captured by the six domains, such as 'care', 'family', 'give, 'read', and 'connect'. This demonstrated that the six domains were adequately and comprehensively capturing the typical ways in which individuals engaged in valued action. That is, the responses to the "other" category did not warrant the inclusion of any further domains. However, given that the aim of the 6W-WeB is to assess the entire spectrum of an individual's valued action, Basarkod (2019) retained the "other" category in the final questionnaire. As mentioned previously, this is also useful when utilizing the 6W-WeB with samples from different countries and cultures to capture any culturally-specific behaviors that may be important.

Using the 6W-WeB

Administering and Scoring

The 6W-WeB can either be utilized as a paper-and-pencil test or as an online form. To conduct as a paper-and-pencil test, simply print out Appendix A (Basarkod, 2019 and Basarkod et al., 2019). For online forms, the questionnaire can be set up as an

online survey through platforms such as Survey Monkey and Qualtrics (as was done in Basarkod's Studies 1 and 2, respectively).

Detailed scoring instructions are presented in Appendix B (Basarkod et al., 2019). The 6W-WeB measure has nine subscales: three global scales and six domain scales. Each of these scales is to be scored independently. Each global scale is scored by taking the mean of all items of that scale. For instance, for the *behavior engagement* scale, take the mean of all "I am satisfied with how frequently I do this" items. There are two such items for each of the six domains. Thus, the behavior engagement score is the average of these 12 items. No items need to be reverse-scored to calculate the global scale scores. Similarly, each domain scale is to be scored by taking the mean of all items assessing that domain. For instance, for connecting with others, take the mean of (i) the two "I am satisfied with how frequently I do this" items, (ii) the two "This is personally important or enjoyable. I do it because I want to do it" items, and (iii) the two "I feel pressured to do this (e.g., from others or from a sense of guilt)" items in the *connecting with others* domain. For each of the domain scales, however, the pressure items need to be reverse-scored prior to calculating the mean. This can be done by subtracting the score on a pressure item from 7 (i.e., 7 – item score = reverse-scored item). Reverse-scoring pressure items ensures that higher scores on each domain scale score indicates greater levels of autonomous engagement in that domain.

Citation and Copyright Information

The 6W-WeB should be cited as follows: Basarkod, G. (2019). *The Six Ways to Well-Being (6W-WeB): A new measure of valued action that targets the frequency and motivation for six behavioural patterns that promote well-being* (Unpublished doctoral dissertation). Australian Catholic University, Sydney, Australia. This thesis – and the 6W-WeB questionnaire presented within it – is licensed under Creative Commons (Attribution 4.0 International; CC-By 4.0). Thus, it is freely available to researchers and practitioners to use for non-commercial purposes, if credited appropriately.

To cite the psychometric properties and validation of the 6W-WeB, please cite Basarkod (2019) as above, as well as: Basarkod, G., Sahdra, B. K., Hooper, N., & Ciarrochi, J. (2019). The Six Ways to Well-Being (6W-WeB): Assessing the frequency of and motivation for six behaviours linked to well-being. *PsyArXiv*. https://doi.org/10.31234/osf.io/jtcng. This preprint is also licensed under Creative Commons (Attribution 4.0 International; CC-By 4.0).

Utility of the Six Ways to Well-Being and Directions for Future Research

The 6W-WeB enables practitioners and clinicians to holistically measure levels of and motivations for valued action. The global scores inform clinicians about their clients' levels of behavior engagement, autonomy, and control. Domain scores can inform the clinician about specific behaviors the clients value the most, and which behaviors, if any, they feel most pressured to engage in. Such information will, therefore, enable

clinicians to capitalize on behaviors that are motivated by autonomous reasons and explore in further detail why their client feels pressured to engage in some domains. By addressing behaviors that involve controlled motivation, the clinician could, in turn, reduce the psychological distress felt by the client, as research shows lower controlled motivation to be associated with better mental health (Ryan & Deci, 2017). Importantly, the 6W-WeB can help shift the focus from how clients feel to what they do, bringing the questionnaires used in interventions such as ACT in line with the core message of such therapy itself. That is, engaging in valued action – such as embracing the moment and being mindful – may enrich and benefit one's life.

Since its initial validation, the Six Ways to Well-Being framework and questionnaire have also been used in practice. For instance, the framework is an integral component of a Personal Social and Health Education (PSHE) curriculum for primary school children (4–11 years) in the UK. This curriculum, called Connect, is in part designed to support children to engage more in the six behaviors (https://www.connect-pshe.org/). The framework has also been utilized by schools in Australia to support the well-being of their students. In addition, the framework informs the book entitled "The Unbreakable Student: 6 Rules for Staying Sane at University" (Hooper, 2021). Each of the six rules in this book map onto the six domains of behavior. Thus, in addition to its primary aim of clinical utility, since 2019, the six ways to well-being has shown to have practical utility.

In terms of future directions for research, while Basarkod (2019) utilized four independent samples to validate the 6W-WeB, it is important to note that all samples were cross-sectional. Thus, although there is sufficient evidence that the six behaviors and the motivations to engage in them are linked to well-being and other close correlates, longitudinal and causal research is required to accurately label these as "ways" to well-being. Such research could ascertain whether increased engagement in the six behaviors for autonomous reasons does, in fact, lead to greater levels of well-being and mental health. Such research could also identify which of the six behaviors, if any, show stronger improvements in well-being. If there are, indeed, some behaviors that are more important for well-being than others, practitioners and clinicians could reliably start behavioral activation in these domains which could later be extended to the other domains.

Future research could also assess how well the 6W-WeB performs in a purely clinical sample and setting. While Basarkod (2019) demonstrated known-groups validity with individuals meeting criteria for psychological distress, and that the factor structure of the questionnaire was invariant across levels of psychological distress, the sample was from the general population and not a clinical sample. Future research could determine whether improvements over the course of behavior-based interventions such as ACT are reflected in changes in the 6W-WeB scores of a client. Doing so would further establish the clinical utility of this measure.

Another avenue for future research would be to explore cross-cultural similarities and differences on the 6W-WeB. This could be done not only in terms of examining differences in the mean levels on the nine scale scores, but also in terms of the specific ways in which people engage in the six domains (i.e., their idiographic responses). Doing so could help answer questions such as "Are some behavior domains (e.g., *connecting with others*) more important and beneficial for people in some cultures and contexts?" and "Are there differences in the ways in which people

enact their values?" In addition, it would be useful to determine whether any systematic domains of behavior emerge through the "other" category. While Basarkod (2019) did undertake cross-national comparisons to some extent, and found that the six domains adequately covered the range of valued action behaviors, the samples were limited to Western, developed countries. Thus, further cross-cultural and cross-national comparisons would be beneficial.

Summary and Conclusion

The Six Ways to Well-Being (Basarkod, 2019; Basarkod et al., 2019) assesses the typical ways in which people engage in six behavior domains that promote well-being: *connecting with others*, *challenging oneself*, *giving to others*, *engaging in physical activity*, *embracing the moment*, and *caring for oneself*. It also measures individuals' frequency of and motivation for engaging in each of these domains. Past research has demonstrated the factor structure, known-groups validity, criterion validity, and clinical utility of the 6W-WeB. While further research is still required, current evidence suggests the following: (i) these six domains are distinct and comprehensively capture individuals' valued action; (ii) the more individuals are satisfied with their engagement in these six behaviors, the more likely they are to experience well-being; (iii) if individuals engage in action because of autonomous rather than controlled motivation, they are more likely to experience greater levels of well-being. Using a questionnaire such as the 6W-WeB can complement interventions aimed to improve valued action, and help researchers assess valued action concretely.

Appendix A

The Six Ways to Well-Being Questionnaire (Basarkod, 2019; Basarkod et al., 2019)

Life Activity Survey

Instructions
You will be asked a series of questions about the activities you engage in. To answer these questions, please focus on behaviors that:

1. You typically engage in.
2. Are observable from the outside.
3. You actually engage in, rather than those you think you should engage in.

You will first be asked to report examples of behaviors, after which you will be asked to rate each of these on three scales. Please select a number from 1 to 6 on these scales to rate the extent to which you agree with it.

CON: Typical ways in which I connect with others.

Think of the typical ways in which you connect with the people around you. How do you connect with family, friends, neighbors, community groups, or other people?

Examples: having conversations, interacting on the internet, doing activities together, celebrating, going out together, etc.

1. Here is an example of how I typically connect with others: _____ _____ _____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

2. Here is a second example of how I typically connect with others: _____ _____ _____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

CHAL: Typical ways in which I challenge myself.

Think of the typical ways in which you challenge yourself and learn new things.

Examples: Trying something new, learning a musical instrument, trying to cook your favorite food, fixing something, developing your skills, taking on new responsibilities, signing up for an online course, etc.

1. Here is an example of how I typically challenge myself: _____ _____ _____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

2. Here is a second example of how I typically challenge myself: _____ _____ _____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

GIVE: Typical ways in which I give to others.

Think of the typical ways in which you give to and/or help others.

Examples: Helping someone to do something, volunteering, making a donation, doing something kind for a friend or stranger, working for a cause, etc.

1. Here is an example of how I typically give to others:

_____

_____

_____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

2. Here is a second example of how I typically give to others:

_____

_____

_____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

PHYS: Typical ways in which I engage in physical activity.

Think of the typical ways in which you engage in physical activities.

Examples: Going for a walk or a jog, cycling, going to the gym, dancing, playing sports with friends, etc.

1. Here is an example of how I typically engage in physical activity: _____ _____ _____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

2. Here is a second example of how I typically engage in physical activity: _____ _____ _____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

EMB: Typical ways in which I embrace the moment.

Think of the typical ways in which you get fully involved in the present moment.

Examples: Being curious, catching sight of something beautiful, noticing something unusual, enjoying and appreciating food, paying full attention to another person, and, in general noticing the world around you and what you are feeling. Just about any activity can involve embracing the moment.

1. Here is an example of how I typically embrace the moment: _____ _____ _____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

2. Here is a second example of how I typically embrace the moment: _____ _____ _____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

CARE: Typical ways in which I care for myself.

Think of the typical ways in which you care for yourself.

Examples: Maintaining a healthy diet, getting enough sleep or doing something relaxing after a hard day.

1. Here is an example of how I typically care for myself: _____ _____ _____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

2. Here is a second example of how I typically care for myself: _____ _____ _____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

Other behaviors I engage in (Optional).

Is there any other activity that you engage in, that does *not* fit into any of the previously mentioned categories:

1. Connecting with Others
2. Challenging Myself
3. Giving to Others
4. Being Physically Active
5. Embracing the Moment
6. Caring for Myself.

If so, please describe this 'other' behavior below and rate it on the same three scales as before.

Another behavior that I typically engage in:

_____

_____

_____

(a) **I am satisfied with how frequently I do this.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(b) **This is personally important or enjoyable. I do it because I want to do it.**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

(c) **I feel pressured to do this (e.g., from others or from a sense of guilt).**

1	2	3	4	5	6
Disagree strongly	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree strongly

Appendix B

Six Ways to Well-Being Questionnaire Description and Scoring Instructions (Basarkod et al., 2019)

Scale description:

This is a measure that assesses valued activity in six behavioral domains: Connecting with Others, Challenging Oneself, Giving to Others, Physical Activity, Embracing the Moment, and Self-Care.

Connecting with Others: This is how you connect with the people around you (such as family, friends, neighbors, or community groups).

Examples: having conversations, interacting on the internet, doing activities together, celebrating, going out together, etc.

Challenging Oneself: This is how you challenge yourself and learn new things.

Examples: Trying something new, learning a musical instrument, trying to cook your favorite food, fixing something, developing your skills, taking on new responsibilities, signing up for an online course, etc.

Giving to Others: This is how you give to others or help others.

Examples: Helping someone to do something, volunteering, making a donation, doing something kind for a friend or stranger, working for a cause, etc.

Physical Activity: This is how you engage in physical activity/exercise.

Examples: Going for a walk or a jog, cycling, going to the gym, dancing, playing sports with friends, etc.

Embracing the Moment: This is how you get fully involved in the present moment.

Examples: Being curious, catching sight of something beautiful, noticing something unusual, enjoying and appreciating food, paying full attention to another person, and, in general noticing the world around you and what you are feeling. Just about any activity can involve embracing the moment.

Self-Care: This is how you care for yourself.

Examples: Maintaining a healthy diet, getting enough sleep or doing something relaxing after a hard day.

For each of the six domains, respondents will need to report two examples of the typical ways in which they engage with that behavior domain. Each example, then, has to be rated on three scales: satisfaction with the frequency of behavioral engagement, autonomous motivation (or importance), and controlled motivation (or pressure).

Initial analysis has revealed the measure to fit well to a bi-factor CFA model. This means that each of the 36 items (2 examples $\times$ 3 rating scales $\times$ 6 domains) will load on one global factor as well as one domain factor. The 3 rating scales form the global factors of Frequency, Importance, and Pressure. The 6 domains of behavior form the 6 domain factors.

Scoring:

The **global factors** are scored by taking the mean of all items of that scale.

E.g., the Frequency factor is scored by taking the mean of items: CON 1a, CON 2a, CHAL 1a, CHAL 2a, GIVE 1a, GIVE 2a, PHYS 1a, PHYS 2a, EMB 1a, EMB 2a, CARE 1a, CARE 2a.

The importance factor is scored by averaging items 1b and 2b for each example, and the pressure factor is scored with items 1c and 2c.

To score the **domain factors**, all pressure items need to first be reverse scored (7 – item score = reverse score). Each of the domain factors are scored by taking the mean of the frequency, importance, and reverse-scored pressure items for that domain.

E.g., the Connecting factor is scored by averaging: CON 1a, CON 2a, CON 1b, CON 2b, CON 3a (reversed), CON 3b (reversed).

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