Development and validation of the State Contentment Measure

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ABSTRACT

In this study, the authors developed and evaluated the psychometric properties of a new self-report instrument - the State Contentment Measure (SCM[1]). Study 1 ($n = 352$) used Exploratory Factor Analysis (EFA) to investigate the preliminary psychometric properties of the SCM. The results indicated two related factors; a cognitive and a physiological factor, with both individually showing satisfactory internal consistency. Confirmatory factor analysis (CFA) in study 2 ($n = 206$) showed satisfactory fit for the 2-factor structure of SCM and slightly better fit for the single factor solution. Study 3 ($n = 83$) demonstrated that the measure was significantly related in the expected directions to theoretically-related and unrelated psychological constructs including happiness, mindfulness, depression, anxiety, stress, and life satisfaction, supporting its convergent and divergent validity. Study 4 ($n = 70$) indicated low agreement between test scores at different time points giving evidence for scale sensitivity to state changes. The SCM is a brief, valid and reliable self-report measure of state contentment that was previously lacking in psychological research. This is an important contribution given the rapid increase of studies using variables that would be likely to produce a state of contentment, such as, mindfulness, music, physical activity and yoga.

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1. Introduction

Attention to positive emotions has gained momentum over the past few decades with an increasing number of links being found with improved health and well-being (Weiss, Westerhof, & Bohlmeijer, 2016; Sin & Lyubomirsky, 2009). Correspondingly, many governments have included happiness as an important indicator of a country's well-being (Huppert & So, 2013). The Oxford Dictionary of English (Stevenson, 2010) defines contentment as "a state of happiness and satisfaction: *he found contentment in living a simple life in the country*." and the Dictionary of Psychology includes contentment as one of the 'valued' psychological phenomena along with satisfaction, hope and optimism, and happiness and well-being (Coleman, 2015). Contentment has been categorised as an affective state (Berenbaum, 2002), that is posited to engender tranquillity and relief arising in situations appraised as safe and as having a high degree of certainty and low degree of effort (Ellsworth & Smith, 1988). Additionally, as a physiological state, contentment is considered to be subtly discernible and at the same time, its specificity has been identified by neurophysiological evidence (Stephens, Christie, & Friedman, 2010), as well as in studies investigating states of meditation (Cahn & Polich, 2006; Williams, 2009). On the other hand, contentment is also viewed as a trait with longer-term adaptive functions (Fredrickson, 1998) and is often used interchangeably with the term 'life satisfaction' (Lavallee, Hatch, Michalos, & McKinley, 2007).

According to Izard (1991), an emotion is a highly complex phenomenon that primarily activates neural, cognitive, and motor responses with each emotion-type having distinct properties and actions. In comparison, a trait is the way an individual may behave emotionally across all situations and across their lifespan (Berkowitz, 2000; Izard, 1991). A trait may be more stable and enduring while an emotion-state is thought to be more easily induced, manipulated and measured (Berkowitz, 2000; Izard, 1991). Importantly, although a trait may not be observed directly, as a predisposition, it may influence an individual's present state (Buss, 1989; Epstein, 1984). Accordingly, if traits and states theoretically share the same latent construct (Medvedev et al., 2017), this would suggest that people higher on trait contentment would be predicted to experience state contentment more frequently. As such, a scale measuring state contentment should include both transient and stable components of contentment.

As an affective state, Berenbaum (2002) defined contentment as the satisfaction derived from achieving the required resource levels associated with feelings of satisfaction in consuming behaviour, or in bodily care, which is experienced when a person's current resources match or exceed the level of need. The definition was based on an investigation

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into whether different types of joy-related pleasurable feelings were associated with different kinds of activities. 162 college students listed and rated the five activities they engaged in most frequently that gave them the most pleasure. Factor analysis revealed that state contentment was associated with activities that were nurturant: "activities that involve taking care of or helping people or things", spiritual: "activities that relate to or are concerned with religion or other forms of spirituality", and physical activities: "activities that primarily focus on the use or maintenance of the body". Further, contentment was primarily associated with being 'satisfied' or 'fulfilled'. One limitation of this study was that it lacked Confirmatory Factor Analysis (CFA) or other psychometric testing, therefore potentially limiting validity.

Descriptions suggestive of the state and trait 'contented' or 'calm' emotion-construct have emerged from studies investigating the neurophysiology of meditation. In their review, Cahn and Polich (2006) identified state changes via meditation as including: "a deep sense of calm peacefulness, a cessation or slowing of the mind's internal dialogue, and experiences of perceptual clarity and conscious awareness merging completely with the object of meditation, regardless of whether a mantra, image, or the whole of phenomenal experience is the focal point" (p.182). Trait changes were defined on the other hand as, "a deepened sense of calmness, increased sense of comfort, heightened awareness of the sensory field, and a shift in the relationship to thoughts, feelings, and experience of self" (p.182). The authors acknowledged the limitations in identifying neurophysiological changes induced from meditative practice however, due to the difficulty in quantifying self-experience (Cahn et al.).

Physiological correlates of state contentment were identified in a study investigating the autonomic specificity of basic emotions (Stephens et al., 2010). The autonomic reactions of 49 undergraduates were measured while they were listening to state emotion-inducing music and films. The measures included heart rate variability, peripheral vascular activity, systolic time intervals, and electro-dermal activity. Pattern classification and cluster analysis classified the contentment-emotion state with a significantly greater than chance level ($z = 6.94$, $p < 0.001$). Added to this, the overall self-report questionnaire classification hit rate for all emotions was 60.6%. The contentment classification condition was significantly greater than chance ($z = 13.06$, $p < 0.001$) (Stephens et al.). This study gives evidence for the presence of the transient and physiological state of contentment.

These aforementioned definitions and studies are important for developing the conceptualisation of contentment by usefully identifying the nuances between the transient and stable components of contentment particularly when as a state, contentment may have a subtle physical manifestation (compared to a more pronounced emotion such as happiness). Ekman's (1993) formative investigations supported this notion that contentment should be categorised as one of the 'basic' emotions, despite it not being overtly apparent. Additionally, contentment is considered to have no real *action* tendency in comparison for example, to fear which may enable the fight-or-flight action; instead, contentment is considered as a mindful emotion involving awareness of, and openness to momentary experiences (Fredrickson, 1998).

On the other hand, contentment has been suggested to have a more stable and adaptive utility, enabling a person to think more broadly in the longer term, to savour their current circumstance, and to integrate this information into forming new views of the world around them (Fredrickson, 1998). This is part of the 'Broaden and Build' theory of positive emotions, (Fredrickson & Branigan, 2005). This theory suggests that positive emotions increase social bonding and reciprocity, facilitate flexibility of mind, increase ability to problem solve and the ability to override standard, habitual, and other uncreative modes of thought.

In one study investigating the undoing effects of positive emotions (on negative emotions), contentment-eliciting and 'amusing' films were found to induce faster cardiovascular recovery including heart rate, pulse amplitudes and transmissions to the finger and blood pressure, compared to neutral or sad films (Fredrickson, Mancuso,

Branigan, & Tugade, 2000). The study involved participants ($n = 170$), who first, viewed a fear-eliciting film, that consequently activated anxiety-induced cardiovascular reactivity. Following this, they viewed a second clip that elicited ether contentment, amusement, neutrality, or sadness. The effects of the subsequently induced positive emotion states were theorised as allowing participants to move from a narrowed thought–action state (caused by the fear-inducing clip) into a state involving a more broadened array of thoughts and actions.

1.1. Existing scales

Presently, there are no published measures specific to the state contentment construct. This is a major limitation for existing research including, for example, the aforementioned Fredrickson et al. (2000) and the Stephens et al. (2010), studies. There are however, state and trait measures constructed to encapsulate the meditation 'experience' that, according to the neuropsychological literature, elicits 'calm' emotions (Cahn & Polich, 2006; Williams, 2009). Conversely, available instruments focus on the underlying phenomena as either, 'states of mindfulness', 'transcendence' or 'altered consciousness' (e.g., Dittrich, 1998; Friedman, 1983; Friedman & MacDonald, 1997; Vaitl et al., 2005) consequently overlooking associated emotions. This exclusion effectively limits the capacity to identify self-reported contentment levels induced by meditation (or other contentment-eliciting activities).

There are, on the other hand, scales that measure constructs related to contentment including, state happiness, discontentment, general wellbeing, life satisfaction and contentment with life (eg., Hills & Argyle, 2002; Hudson & Proctor, 1977; Diener, Emmons, Larsen, & Griffin, 1985; Lavallee et al., 2007). Most relevantly, Lavelle and colleagues developed a self-report measure of general life Contentment (Contentment with Life Assessment scale: CLAS) that comprises of items combining affective responses and cognitive evaluations. Items measuring daily contentment levels considered as more closely reflective of perceived global contentment were also included. With this measure, the authors addressed the limitation identified in satisfaction with life scales suggested as capturing more of an objective and cognitive evaluation of what a person might have rather than how they feel about what they have. In other words, individuals may respond to the more traditional life satisfaction items by evaluating what they think they should be satisfied with rather than people who feel satisfied because they have the life they want (Lavallee et al., 2007). The CLAS, now enabled the measurement of a general feeling of contentment in life.

Importantly, subjective evaluation of life events has been shown in previous research to influence emotional responses (LeDoux, 2000; Medvedev, Shepherd, & Hautus, 2015). Theoretically, an individual who takes a mindfulness class may show lower than expected levels of change in self-reported contentment if they had an underlying lower life satisfaction due to relationship issues (as an example). In comparison, another individual taking the same class might exhibit a higher state contentment change due to a higher satisfaction with their life in general. The CLAS would be useful in picking up these more stable trait-like contentment influences, however, transient cognitive and physical changes would additionally need to be measured to allow for a more complete picture of an individual's present state of contentment.

In sum, existing happiness/contentment or meditation-experience scales are not designed to, and therefore not able to, capture momentary changes in state contentment. Scales measuring either contentment or satisfaction tend to be focussed on perceived life satisfaction with questionnaire items revolving around how an individual views their life overall and leave an incomplete picture of the transient state of contentment. Scales measuring the meditation phenomena are also limited in that they omit the associated emotions. The present study brings together the present literature to conceptualise state contentment as including stable and transient cognitive- affective and physiological components.