Identifying gender differences in the independent effects of personality and psychological well-being on two broad affect components of subjective well-being

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ABSTRACT

Subjective well-being (SWB) is defined in terms of positive and negative affect whilst psychological well-being (PWB) reflects self-referent attitudes of mastery and self-acceptance. Whilst both SWB and PWB are associated with personality, concurrent analysis is limited. This study ($n = 679$) reports on a teacher sample in which personality, SWB and PWB were measured. Results indicated moderate correlations between variables. Hierarchical regression controlled for personality and identified PWB as a significant predictor of SWB. Separate predictors of negative and positive affect support the need to assess both SWB affective components. As the most significant predictor of positive affect the inclusion of PWB is needed in future well-being research.

1. Introduction

Considerable effort has sought to extend notions of well-being and wellness as the absence of ill-being states, with psychological constructs such as self-concept, mastery, and resilience that have been demonstrated as important components of positive well-being (e.g. Burns, 1979). Increasingly, findings that identify the impact of such positive psychology constructs are informing government policy on health and well-being (e.g. Huppert, 2008).

Two main approaches to the study of well-being have been described (Ryan & Deci, 2001). The subjective well-being (SWB) approach focuses on those experiences that make life either enjoyable or unpleasant. The identification of two broad affect states, positive and negative affect, has been well supported (e.g. Watson, Clark, & Tellegen, 1988) and increased pleasant and decreased negative valence states typically defines optimal SWB (Vittersø, 2001). The need to discern between these affect states is important. For example, the negative affect and anxiety/depression link is well established (e.g. Watson et al., 1988), and the importance of positive emotions in broadening and expanding individuals' cognitive and behavioural tendencies, has been reported (Fredrickson, 2003).

Other important facets of SWB are related to its degree of temporal stability. Dynamic Equilibrium Theory (DET) proposes that SWB states are malleable to life events and experiences (Headey & Wearing, 1989), but that changes in affect generally return to their set-point level (Kahneman, 1999), a significant proportion of which appears genetically pre-determined (Lykken & Tellegen, 1996). However, much DET research has used life satisfaction measures which fail to describe different affective components, and much cross-sectional and longitudinal data fails to capture the extent and duration of changes from set-point levels. Consequently, the extent genetics determine SWB is likely over-estimated (Huppert, 2005). Headey (2008) has recently argued that DET describes SWB for most, although for a significant minority high in extraversion and/or neuroticism, long-term changes in life satisfaction can be substantial.

In contrast to SWB, the psychological well-being (PWB) approach emphasises characteristics which are related to optimal SWB. Due to the reactive nature of SWB components, where variability would make them poor indicators of long-term wellness, PWB proponents (e.g. Ryff & Singer, 1998) have challenged SWB as limited in describing long-term positive functioning, and a fallible indicator of healthy living. PWB may function as a predictor of extent and duration of SWB reactivity. Ryff (1989) operationalised a multi-dimensional model of PWB that tapped six related concepts of well-being, including autonomy, personal growth, self-acceptance, purpose in life, environmental mastery, and positive relations with others, which are seemingly more temporally stable (Ryff & Singer, 1998). This clash of well-being paradigms has led to differing definitions of wellness and different issues concerning the causes, consequences, and dynamics of well-being, yet terms like affect, well-being and personality are frequently cited topics (e.g. Schmutte & Ryff, 1997). However, the extension of the well-being-personality literature with PWB models is less detailed.

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1.1. Well-being and personality

Generally using SWB models, associations between well-being and personality are frequently reported. Extraversion is typically related to positive affect and neuroticism to negative affect (e.g. Costa & McCrae, 1980; Diener & Lucas, 1999). DeNeve and Cooper's (1998) meta-analysis identified extraversion and agreeableness as consistently positively correlated with global SWB, whilst neuroticism was consistently negatively correlated.

Personality also appears related to SWB reactivity. Individuals with higher SWB possess attribution styles which are self-promoting and subsequently contribute to higher levels of satisfaction and happiness and report stressful life events in a less negative way than those with lower SWB (Lyubomirsky & Ross, 1999). Similarly, Kling, Ryff, Love, and Essex (2003) demonstrated how neuroticism and openness to experience predicted increases in negative affect after a stressful life event, whilst extraversion and openness to experience predicted increases in positive affect. That openness is positively related to both positive and negative affect has also been reported in large longitudinal panel data (Headey & Wearing, 1989). These findings suggest that the impact of stressful experiences on well-being may be influenced by personality. Also, the effect of different personality traits on different SWB components supports the need to discriminate between SWB components (Ryan & Deci, 2001).

There are clearly well-established relationships between SWB and personality. However, the role of PWB in the personality-SWB link is limited. One example includes Schmutte and Ryff's (1997) analysis of a five-factor personality inventory and Ryff's model of PWB which controlled for affect. Since only small to moderate correlations between the dimensions of PWB and personality remained after controlling for affect, there are significant non-overlapping effects between personality and PWB.

There has been little attempt to replicate Schmutte and Ryff's (1997) findings. Moreover, the factorial validity of Ryff's (1989) 6-PWB scales, has been questioned (e.g. Springer & Hauser, 2006). Whilst support for the 'a priori' six-factor model has been received (e.g. Clarke, Marshall, Ryff, & Wheaton, 2001) strong correlations between four PWB variables: environmental mastery (E), personal growth (G), purpose in life (P), self-acceptance (S) (EGPS), suggests that these variables reflect one super-ordinate PWB factor (Abbott et al., 2006). A recent analysis (Burns & Machin, 2009) supported this amended PWB structure and importantly also differentiated items between this modified three-factor PWB structure and two SWB affect components, positive and negative affect.

1.2. Aim

The current study will identify the unique effects of PWB on two broad SWB affect states, positive and negative affect, after controlling for personality and demographics effects. Analyses will test for gender differences on all of the variables. A multi-groups analysis will test whether a personality and PWB predictor model of SWB is invariant across the genders.

2. Method

2.1. Participants and design

Data was drawn from an organisational climate study ($N = 679$) comprising three samples of high-school teachers, from privately-funded schools in the Australian Capital Territory, Australia ($n = 253$), school-teacher members of the Norwegian teacher union ($n = 250$), and from International Schools ($n = 176$) worldwide. Predominantly female (63%), almost half of the sample (46.2%) was

aged between 30 and 55 years of age, although 63.2% of the Norwegian sample was aged 45 years and older. Many participants did not live in the immediate vicinity of the university and so accessed the survey through a secure web facility, run and monitored by the technical services staff within the University of Southern Queensland's Department of Psychology. The University's Human Research Ethics Committee provided approval for the study.

3. Measures

3.1. Psychological well-being (PWB)

A 54-item version of Ryff's (1989) PWB scales assessed six dimensions of PWB: environmental mastery (E), personal growth (G), purpose in life (P), self-acceptance (S), (EGPS; $\alpha = .785$); autonomy (A; $\alpha = .613$); and positive relations (PR; $\alpha = .777$), with participants indicating their response on a 6-point Likert-type scale, with higher scores on each scale indicating greater well-being on each dimension. Factor analysis of the PWB variables (not reported here) supported previous analyses (Burns & Machin, 2009), which combine 4 of the PWB variables E, G, P, S to create a super-ordinate first-order PWB factor, EGPS.

3.2. Subjective well-being (SWB)

The Positive And Negative Affect Schedule (PANAS; Watson et al., 1988) assessed SWB with 20-items relating to positive affect ($\alpha = .877$) and negative affect ($\alpha = .885$). Individuals indicated their response on a 5-point Likert-type scale, with higher scores on each scale indicating greater well-being on that dimension.

3.3. Five-factor personality structure

A 50 item personality measure from the International Personality Item Pool (IPIP; Grucza & Goldberg, 2007) assessed five domains: neuroticism ($\alpha = .871$), extraversion ($\alpha = .789$), agreeableness ($\alpha = .771$), openness to experience ($\alpha = .737$), and conscientiousness ($\alpha = .839$). Comparative analysis of 11 personality inventories suggests that the IPIP scales are well-validated measures of the five-factor personality structure (Grucza & Goldberg, 2007). All internal reliabilities for all the sub-scales of these measures were within acceptable levels.

3.4. Statistical procedure

Analyses were computed using SPSS and AMOS v17. Bi-variate correlations tested the associations between all PWB, personality and SWB variables, and t-tests identified gender differences on these variables. Hierarchical regression analysis controlled for demographics and personality variables to test the PWB effect on positive and negative affect. A multi-group Structural Equation Model (SEM) tested whether the PWB and personality regression model identified in the hierarchical regression analyses was invariant between gender.

4. Results

Moderate to strong bi-variate correlations between SWB, PWB and personality were highly significant ($p < .001$), except for the non-significant coefficients reported between openness to experience with neuroticism, positive relations, and conscientiousness (Table 1). Except for two negative coefficients with negative affect and neuroticism, positive affect reported positive associations with all other variables, whilst only neuroticism and openness to experience reported positive associations with negative affect. The