

Personality and wellbeing in people living with a chronic wounds



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People living with chronic wounds face substantial challenges to their wellbeing, including stigma, psychological stress, malodour, treatment regimens and social isolation. This is significant, since increased wellbeing is associated with faster wound healing and better mental health. Considerable research has highlighted the impact of personality on general health and there is emerging evidence that personality (particularly the trait ‘neuroticism’) can have considerable influence on the wellbeing of someone living with a chronic wound. Consequently, the authors recommend that treatment plans consider personality, since this has the potential to facilitate new interventions to improve wellbeing that are more tailored to an individual’s needs.

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The prevalence of chronic wounds is expected to rise as predisposing conditions, such as diabetes and morbidity associated with greater longevity, increases (Sussman, 2014). Living with a chronic wound impacts on both psychosocial and physical health, resulting in increased stress, anxiety, depression, sleep disruption, social isolation and body image issues (Hopman et al, 2014; Upton and Upton, 2015). Indeed, the relationship between adverse mental health outcomes, such as depression and anxiety, and delayed wound healing is well known (Robinson et al, 2017; Walburn et al, 2017). Consequently, to be effective, the assessment and treatment of chronic wounds must consider the person holistically and not just address physical symptoms (Wounds International, 2012; Upton and Upton, 2015).

In both health and research practice, wellbeing is often conflated with quality of life (QoL), a related but distinct concept (Upton et al, 2014). In short, health-related QoL (HRQoL) refers to the cognitive self-appraisal of health circumstances, whereas wellbeing indicates a more emotional response to those circumstances (Upton et al, 2014). As Upton

et al (2014) note, HRQoL is usually measured in deficit terms, focusing on the aspects of a person’s experience that detract from their overall wellness, such as the level of pain they are experiencing. It is then assumed that a lack of problems equates to positive HRQoL or wellbeing. The authors argue that a more strengths-based salutogenic approach, which focuses on growing the assets and resources that contribute to wellbeing is a more fruitful approach for improving wellbeing than simply focusing on controlling limiting factors.

It has been suggested that one route to improving the wellbeing of people with chronic wounds could be the development of personal resources related to personality traits (Alexander et al, 2015). Indeed, recent work in other areas has demonstrated a robust relationship between personality and health outcomes (Strickhouser et al, 2017).

Furthermore, different personality types may have distinctive vulnerabilities to certain health conditions (Bagby et al, 2016; Newby et al, 2017), and may respond differently to specific treatment modalities (Bagby et al, 2016). Personality profiles may also provide healthcare professionals with insight to enhance people’s

mental health and, by extension, their wellbeing (Spinhoven et al, 2012; Bagby et al, 2016).

This review, therefore, examines the relationship between wellbeing and personality in people living with chronic wounds, in order to understand the psychosocial effects of living with chronic wounds for individuals, identify significant risk or protective factors and highlight the implications for clinical practice.

Wellbeing in people living with chronic wounds

Several factors related to the experience of living with a chronic wound have a significant impact on wellbeing and HRQoL (Upton and South, 2011). These include older age (Steptoe et al, 2014), chronic pain (Upton and South, 2011), wound management, social factors (including loss of support networks), perceptions of self and others (Adni et al, 2012), and emotional factors, including clinical depression and anxiety (Upton and Solowiej, 2010; Upton et al, 2014; Upton and Upton, 2015).

Furthermore, the psychosocial factors associated with living with a chronic wound are known to affect the physiological process of wound healing (Upton and Solowiej, 2010; Robinson et al, 2017; Walburn et al, 2017). Difficulties, such as anxiety, depression, stress, and negative illness perceptions (Hughes et al, 2016; Walburn et al, 2017), affect healing both directly — by triggering physiological processes that inhibit healing — and indirectly. For example, depression causes sleep disturbances that, in turn, affect the body's ability to heal (Hughes et al, 2016).

If reduced wellbeing can inhibit healing, it should follow that increased wellbeing can bolster it. A recent review (Robinson et al, 2017) concluded that psychological interventions facilitate healing of both acute and chronic wounds. Positive personal resources associated with wellbeing have also been identified, including optimism, resilience and positive illness perceptions (Upton and Solowiej, 2010; He et al, 2013).

Measuring people's wellbeing may, therefore, be key to providing better health outcomes, by providing a greater emphasis on psychosocial over physical health (Dolan et al, 2012). This may be particularly relevant to chronic wound patients for whom full healing may occur slowly or not at all (Upton and Upton, 2015). However, work in this area is limited by a lack of consensus over how exactly to define HRQoL and wellbeing, as well as the types of measure that should be used — for example, generic versus

wound-specific tools. In the wellbeing/HRQoL arena, it is generally accepted that condition-specific measures provide a more nuanced and sensitive understanding of a condition's impact on the individual (Upton and Upton, 2008). However, specific measures of wellbeing for people living with chronic wounds are lacking.

In order to address this gap, Upton et al (2016) developed the Well-being of Wounds Inventory (WOWI). The WOWI comprises two sub-scales: the Wound Worries scale, which measures the HRQoL aspect of wellbeing, and Personal Resources, which measures the supports and inner strengths available to someone living with a chronic wound. Upton et al (2016) found that the Wound Worries scale was responsive to changes in wound health, but the Personal Resources scale was not. This suggests that wellbeing in people with chronic wounds has a different origin than HRQoL and this may be due to fundamental differences in personality, a relationship hinted at by Alexander et al (2015), when they noted the WOWI sub-scale of Personal Resources may be linked to personality traits.

Personality and wellbeing

As with HRQoL and wellbeing research, a significant criticism of research into personality and health is the limited consensus among the measures used. For this review, therefore, the authors have focused on studies that have used the most psychometrically sound and well researched of the measurement scales. These specifically concern the most prominent of the modern-day personality theories, the Five-Factor Model (FFM; Costa and McCrae, 1992; McCrae and Costa, 2003).

In brief, the five traits described in the FFM are:

- Neuroticism: the tendency for a person to experience negative thoughts and disturbances in their behaviour and emotions
- Extraversion: an inclination to gregariousness and lively interaction
- Openness: describes an interest in new ideas and experiences, compared with a preference for familiar, even traditional ways
- Agreeableness: characterised by being kind to others and keeping the peace compared with tough-mindedness and addressing conflict rather than avoiding it
- Conscientiousness: describes qualities of organisation and accomplishment, compared with the opposite dimension of being more easy-going and relaxed (McCrae and Costa, 2003).

All five traits have been found to be related at least in some part to aspects of wellbeing, however, research suggests that neuroticism, perhaps because of its association with mental health difficulties, is the trait with the closest association to wellbeing (Chen et al, 2012; Otonari et al, 2012; Strickhouser et al, 2017).

Several studies have identified strong correlations between neuroticism and negative affect (Etxeberria et al, 2019), as well as disorders such as anxiety (Lahey, 2009; Barlow et al, 2014). However, while neuroticism may increase vulnerability, scoring high on this personality trait does not necessarily accord with having mental health problems (McCrae and Costa, 2003). While managing the reactivity of emotions that comes with high neuroticism can be burdensome, the trait describes only a tendency to certain behaviours and thoughts (McCrae and Costa, 2003). How they manifest in a person depends upon their wider personality profile, as well as environmental traits (McCrae and Costa, 2003; Lahey, 2009; Weston and Jackson, 2015). For instance, Weston and Jackson (2015) noted that neuroticism when combined with high conscientiousness could be beneficial by reducing risky health behaviours, such as smoking. In contrast, a study of healthy older adults found neuroticism and extraversion were the strongest predictors of life satisfaction, an important aspect of wellbeing (Etxeberria et al, 2019).

Extraversion has been suggested as a predictor of wellbeing by some (e.g. Etxeberria et al, 2019) but not all studies (e.g. Otonari et al, 2012), with the link seeming to be due to increased positive affect. Increased positive affect has also been linked to higher conscientiousness, openness (Etxeberria et al, 2019), and agreeableness (Strickhouser et al, 2017).

Personality traits are believed to be relatively stable in adulthood, and this is supported by the research (McCrae and Costa, 2003). However, there is good evidence that neurological and mental health problems can alter personality traits (McCrae and Costa, 2003; Lahey, 2009; Soto, 2015). Depression, for example, when present at clinical levels, can increase levels of neuroticism (McCrae and Costa, 2003; Lahey, 2009). However, this may be a temporary change, as research has shown that when depression is treated, measures of neuroticism return to pre-illness levels (McCrae and Costa, 2003). McCrae and Costa (2003) posit that, while this is a transient effect, the increase in neuroticism is a real change in personality

brought about by a disease of the brain, albeit one that is treatable. Notably, other studies considering the relationship between personality and various mental health disorders have found neuroticism and conscientiousness to be the principal predictors of changing comorbidity (Spinhoven et al, 2012).

Given that we know disorders of affect, such as depression, are related to wellbeing, it is not too great a leap to propose that there may be a reciprocal effect between wellbeing and personality traits. For example, someone high in extraversion, agreeableness, conscientiousness, and emotional stability (neuroticism reversed) would exhibit higher levels of wellbeing, but that conversely, increases in wellbeing would also increase these personality traits (Soto, 2015). Of course, it also holds that the reverse would be true, such that lower levels of these traits lead to lower wellbeing and vice versa.

While personality appears to have a relationship with wellbeing, and this is confirmed by studies concerning various health conditions, it has also been suggested that this relationship may be mediated by other factors. While no studies have yet been undertaken with a chronic wound population, there is evidence from other fields that factors such as resilience (Temprado et al, 2017) and coping strategies (Van de Ven and Engels, 2011) may influence the connection between personality and wellbeing.

Conclusion and recommendations

There appears to be some consensus that neuroticism is the strongest personality trait predictor of wellbeing for people living with chronic wounds. Conscientiousness and extraversion may also be significant predictors, but there are varied results regarding the role of extraversion. Agreeableness has some support as a possible predictor, albeit less than neuroticism or conscientiousness. Further to this, some studies (Van de Ven and Engels, 2011; Temprado et al, 2017) indicate that other individual resources may mediate the relationship between personality and wellbeing.

Studies, therefore, indicate that there is a strong relationship between living with a chronic wound and wellbeing and that evidence (mainly from other conditions) suggests personality may influence this relationship. Consequently, this has significant recommendations for clinical practice:

- Increasing wellbeing can improve wound healing
- Wellbeing needs to be assessed through the use of condition specific measures as

this will allow for the effective tailoring of interventions and support programmes

- Bolstering positive resources by increasing resilience and coping strategies may assist in increasing wellbeing
- Positive framing of the condition, the treatment and the psychosocial situation will support personality traits such as conscientiousness, which may decrease risk behaviours
- Providing hope for the patient and reframing illness perceptions/social comparisons with others to be more positive can also have a positive impact on wellbeing
- Certain personality traits (mainly neuroticism) have been linked to vulnerability and, consequently, clinicians need to take this into account in the development of treatment plans
- Clinicians need to be aware of the link between negative affect and neuroticism as improving affect may well reduce neuroticism and therefore increase wellbeing.

The study of wellbeing in people with chronic wounds has only recently commenced and similarly the relationship of personality to wellbeing has not yet been fully examined. Future work would benefit from using a condition-specific measure for people living with chronic wounds, such as the WOWI, to avoid some of the uncertainties that have been observed when a more general measure of wellbeing is used. Identifying whether the relationship observed between personality and wellbeing holds in people with chronic wounds, and examining any mediating factors, has the potential to facilitate new interventions to improve wellbeing that are more tailored to an individual's needs. It also provides the opportunity to proactively tackle issues raised by a personality profile, such as higher levels of anxiety or ambivalence towards authority figures, before the psychosocial factors associated with those issues can detrimentally affect healing in patients with potentially chronic wounds. This could be the start of an exciting development in personalised psychological treatment for people with chronic wounds to supplement the evolution of personalised medicine currently under way.

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