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The significance of transport mobility in predicting well-being

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ABSTRACT

Transport mobility provides increased opportunities for individuals to undertake fundamental tasks beyond the home environment, such as going to work and purchasing essential goods. Moreover, transport mobility may also play an important role in helping to satisfy inherent psychosocial needs which are deemed necessary for well-being, such as relating well with others, feelings of competence and mastery, and heightened autonomy. Exploring these relationships more fully is the focus of the current study. Based on responses from 435 participants from Melbourne, Australia, hierarchical regression analyses were undertaken to test whether transport mobility predicts subjective well-being as mediated by psychological well-being (N=435). Support was found for a full mediation model, whereby transport mobility predicted subjective well-being through the mediating variables of environmental mastery, positive relations with others and self acceptance. Thus, the impact and benefits of transport mobility extend to psychosocial factors related to well-being. Although additional work is needed to confirm these findings using varied samples and measurement approaches, this is a valuable outcome which provides some justification for developing policy and investing resources into improving transport mobility to promote highly desirable outcomes related to well-being.

1. Introduction

Mobility and transportation are necessary for coping with distances, enabling access to essential services and goods, and for engaging in a range of activities outside of the home (Mollenkopf et al., 2005). Mobility also enables individuals to participate in social and community life (Schaie, 2003) and to engage more fully with others and the world, thus making it an important antecedent of well-being and consideration for social and health policy (Stanley et al., 2011).

Transport research and policy has focused almost exclusively on objective indicators of mobility such as travel time and frequency, safety and physical access to transport. There is however, increasing recognition that social factors are also important considerations in transport research (Lucas and Markovich, 2011). At a conceptual level Geurs and Wee (2009) have argued that transport policy appraisal should include assessment of three important factors: economic, ecological and social, and that more attention is needed on the latter. Stanley and Stanley (2007) also identify the void with respect to social factors and have consequently published a model of mobility outcomes which acknowledges well-being, social capital, and community connectedness. The current authors have expanded this model to include psychological factors and argue that knowledge on the interaction effects of social and psychological factors that translates to social policy is critical for building effective mobility systems (Stanley and Vella-Brodrick, 2009). Mollenkopf et al. (2005) in their study examining mobility in later life, found that mobility was related to psychological constructs such as control beliefs and quality of life and support the notion that psychological aspects are relevant to mobility research. Bergstad et al. (2011) found with their sample of 1330 Swedish participants that satisfaction with travel was a significant predictor of well-being (which was partially mediated by participant's level of satisfaction with activities). Collectively these studies underscore the importance of exploring both individual and contextual factors relating to transport so that the full benefits can be optimised through policy formation and implementation. However, at present transport research has largely ignored the psychosocial factors associated with mobility.

Similarly, scholarly works examining the correlates of well-being seldom consider factors associated with transport or mobility (e.g., Diener et al., 1999). Instead a primary focus has been on the importance of social support (Diener and Seligman, 2002). However, one likely antecedent to social support is mobility, as increased mobility may lead to the generation of more resources such as social networks and support. Furthermore, consistent with the findings of Bergstad et al. (2011) satisfaction with travel and activities undertaken, significantly predict well-being. Hence, the

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broad aim of the current study is to explore more fully the relationship between well-being and transport mobility with the view to consolidating these two previously disparate lines of research and encouraging more work to be conducted on the psychosocial impacts and effects of transport mobility. First a definition of well-being as applied to this study will be provided. Then a justification for including well-being as an important outcome variable for mobility related research will be presented followed by a discussion of the potential role mobility may play in influencing psychological needs and well-being.

1.1. Defining well-being

Well-being can be conceptualised in many ways, but it is typically represented by notions of happiness, life satisfaction, fulfilment and human flourishing. There are two prominent frameworks of well-being in the psychological literature, (1) subjective well-being (SWB) and (2) psychological well-being (PWB), (Ryan and Deci, 2001).

SWB is a scientific term denoting happiness. It is generally accepted that SWB comprises high levels of Life Satisfaction and Positive Affect (PA) and low levels of Negative Affect (NA) (Diener et al., 1999; Lucas et al., 1996). Empirically these three components are independent and each contributes uniquely to gaining a clear and comprehensive understanding of SWB (e.g., Lucas et al., 1996).

PWB, a form of eudaimonic well-being (Keyes et al., 2002; Ryff, 1989), focuses on the importance of life purpose and personal growth. Ryff's model and corresponding measure of PWB is based on six dimensions, namely, (1) *autonomy:* one's self-determination, ability to sustain individuality, self evaluation and regulation of one's own behaviour and personal standards, (2) *environmental mastery:* a sense of competence and mastery and the ability to shape surroundings to meet needs, (3) *personal growth:* a sense of continued development and potential, making the most of one's talents and openness to new experiences, (4) *positive relations with others:* one's experience of affectionate, trusting, empathetic relationships and an understanding of the reciprocity of relationships, (5) *purpose in life:* a sense of goal directedness and life meaning and the belief in one's efforts, and (6) *self-acceptance:* positive self-attitude while being aware of one's limitations and an acknowledgement and acceptance of both good and bad self-qualities.

The aforementioned hedonic and eudaimonic well-being frameworks reflect the variety of wellness experiences. While satisfaction, joy, and pleasure are deemed to be important for a good life, so too is having a meaningful, authentic life which includes sufficient opportunities for growth and quality interactions with others (Vella-Brodrick et al., 2009).

1.2. Functions of well-being

Well-being is not just something people desire because it feels good but also because it is associated with a range of other highly valued outcomes such as positive relationships, low health care use and high productivity (Keyes and Grzywacz, 2005; Lyubomirsky et al., 2005). According to the Broaden and Build theory (Fredrickson, 2001), positive emotions serve two important functions. First they broaden an individual's thought-action repertoire whereby specific emotions can elicit certain actions. For example, the emotion of *joy* encourages a more open and playful mode, and *interest* induces a desire to explore, grow and develop. Second, these broadened experiences enable individuals to build valuable physical, social, intellectual and psychological resources which they can draw on in times of need. This sequence then generates more positive affect which helps to reinforce and heighten the process, often referred to as the upward spiral of positive affect.

There has been substantial empirical support for the Broaden and Build theory (Fredrickson and Joiner, 2002; Fredrickson and Branigan, 2005) and the benefits associated with positive emotions including a meta-analysis by Lyubomirsky et al. (2005) which found that happiness predicted levels of sociability and activity, physical health, improved conflict resolution skills, and prosocial behaviour. Consequently there is a desire to understand how one can promote well-being. Self-Determination Theory (SDT) may provide some insight.

1.3. SDT and PWB

SDT (Deci and Ryan, 1985, 2000) espouses that humans have three universal psychological needs, namely competence, relatedness and autonomy. *Competence* refers to the belief that one has the resources to achieve important outcomes. *Relatedness* refers to having supportive and satisfying social relationships, and *autonomy* refers to the perception of undertaking activities based on choice, volition and self-determination. It is believed that individuals who are able to consistently meet these psychological needs will demonstrate healthy functioning (Ryan and Deci, 2000). Both SDT and PWB (Ryff, 1989) emphasise the importance of autonomy, quality relationships with others and having a sense of competence and mastery. Both perspectives are also based on the tenet that individuals naturally move towards experiences that foster growth and development. Confronting and mastering challenges, developing positive relationships, accepting and being true to the self and finding life purpose are important elements of this growth process (Ryff, 1989).

A key question concerns how individuals can have their psychological needs met more readily. In this respect it is possible that environmental factors related to mobility and transport policy can influence the extent to which these psychological needs are being met.

1.4. Mobility and measurement

At its simplest level, mobility refers to physical movement and the realisation that one can potentially extend this physical movement to undertake a variety of trips and activities which occur outside of the home (Mollenkopf et al., 2005). Mobility can occur by foot (e.g., walking), through the use of natural forces (e.g., bikes) or by using mechanical or motorised methods of transportation (e.g., cars and trains). One potentially important factor raised in this paper relates to whether perceptions of transport mobility are related to psychological needs. Transport mobility is a multidimensional construct involving factors related to location, accessibility to mobility and any imposed restrictions on personal access associated with physical and psychosocial aspects. Moreover, other terms are often used interchangeably with transport mobility including the opposite end of the scale; transport disadvantage.

Although measurement approaches and definitions vary, transport mobility has most commonly been assessed using indicators such as car ownership or access, public transport service levels, number of trips and distances travelled (see Currie and Delbosc, 2010; Hurni, 2007; Mollenkopf et al., 2005). There are however, limitations with these measurements in that individuals who for example, do not own or have access to a car are often categorised as transport disadvantaged, however they may rely on other forms of mobility (e.g., walking, cycling, and public transport) or they may not have a great need for transport mobility depending on geographic location, access to services and resources, level of help and support, and individual needs and preferences.

Similarly, the extent to which one is actually transport mobile does not provide the full story. For example Metz (2003) found