# Volume I: Research component

# Subjective well-being in older adults


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To Eivor and Olga,

my vivacious and joyful grandmothers.

Thanks for showing me the worthwhile paths in life and for sharing with me your incredible life stories. Your wisdom and wonderful sense of fun will forever lead me on my way.

## Overview

This thesis, which fulfils the partial requirement for the degree of Doctorate in Clinical Psychology at the University of Birmingham, UK, integrates the combined work undertaken whilst on the three-year programme. As such, it contains clinical case reports and the academic research component.

Volume I includes three papers. The first paper is a literature review of the field of well-being in older people. In particular, aspects of how well-being is defined and measured are explored. The second paper, deals with the development and validation of a measure of well-being in older adults, The Well-Being Assessment Schedule for Older People. This measure makes use of older people's understanding of the aspects impacting on well-being. The final paper of Volume I is an executive summary of the main research findings.

Volume II includes five clinical practice reports. The first report investigates service users' views regarding the introduction of a new assessment system, triage, in a local Child and Adolescent Mental Health Service. The second paper is concerned with the formulation of school anxiety, using a psychodynamic and a cognitive-behavioural framework. Paper three uses a behavioural model as a basis to understand the way in which feedback loops reinforced challenging behaviour in a 13-year-old boy with Down's Syndrome. The fourth paper utilised a consultancy model of shared formulation in a multi-disciplinary team when aiding an understanding and guiding treatment for an elderly women presenting with dependency and depressive symptoms. Finally, the fifth report, presented here in the form of an abstract, investigates the role of anger and aggression in a 36-year-old man's life utilising a social constructionist framework.

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# Paper 1: Measuring Subjective Psychological Well-being in Older Adults: A Systematic Evaluation of Assessments.

**Abstract**

The current paper reviews measures of subjective psychological well-being in older adults and draws conclusions about how the concept of well-being is defined and measured. A systematic search of four databases identified eight measures developed to capture the notion of psychological well-being; the Positive And Negative Affect Schedule, the Life Satisfaction Index, the Bradburn Affect Balance Scale, the Satisfaction with Life Scale, the Perceived Well-Being Scale, the Scales of Psychological Well-Being, the Warwick Edinburgh Mental Well-Being Scale, and the Memorial University of Newfoundland Scale of Happiness. An evaluation of these measures revealed a range in dimensionality and composition, with measures defining well-being as primarily hedonic, eudaimonic, or a combination of the two. The validity of the measures was investigated by considering the extent to which measures capture facets of well-being identified by older people as important for successful aging. It was concluded that whilst all measures consider several important aspects of well-being, no measure captured the entire range of factors highlighted by older people as paramount to well-being.

## Introduction

In England, the number of people over 65 years of age has more than doubled since the 1930s, with a fifth of the population today being over 60. The Office for National Statistics concluded that for the first time, there are more pensioners in the United Kingdom than there are under 16s (Dunnell, 2008). With more people reaching old age there has been a significant interest in exploring what constitutes successful aging. In the literature, there has been a significant shift towards positive psychology and the notion of well-being. Importantly, this shift has taken well-being to mean more than the absence of ill-health. Rather, research has been interested to explore older people's values, aspirations, and needs to gain an understanding of subjective experiences important for well-being. The importance of subjective experiences and the effects of these on mental health and overall welfare have been at the core of applied psychology for decades. The importance of successfully measuring well-being cannot be underestimated, as it guides clinical application but also offers information for evaluating service provision and shaping policy. The present paper reviews measures used to assess subjective well-being in older people.

### Defining well-being

'Quality of life' and 'well-being' are terms that have been used somewhat interchangeably in the research literature to refer to a person's successful state of being (Kahn & Juster, 2002). However, some researchers have suggested that although related they may in fact describe different aspects of a persons satisfaction with life. Zikmund (2003) suggests that well-being is a more immediately experienced state whereas quality

of life refers to a more complex mixture of aspects that enable life satisfaction over a greater duration. Papadopoulos (2009) suggests that the difference has more psychological valence; describing well-being as relating to one's psychological experiences and functioning whilst quality of life involves valued and chosen contexts and opportunities from which one derives well-being. Therefore, in order to investigate and seek to understand what makes older adults' lives meaningful the current paper will focus specifically on subjective well-being akin to Papodopoulos' (2009) definition.

Well-being has generally been defined as either the *absence* of specific criteria most commonly associated with ill-being, whether physiological (e.g. Bookwala, Harralson, & Parmelle, 2003) or psychological (e.g. Boey & Chiu, 1998; Ormel, Kempen, Deeg, Brilman, van Sonderen, & Relyveld, 1998), or the *presence* of criteria associated with objective well-being, such as acceptable living environments (e.g. Lawton, 1983), activity participation (Litwin & Shiovitz-Ezra, 2006) and financial stability (e.g. Lusardi & Mitchell, 2005). A common conceptualisation of well-being is one which distinguishes between objective and subjective well-being (e.g. Kahn & Juster, 2002), or one which incorporates varying weightings of the two (Lawton, 1983). Whilst objective well-being commonly has been understood by considering individuals' material, social, and personal resources, research into subjective well-being has been more interested in exploring the way individuals evaluate their situation and life circumstances (Smith, Borchelt, Maier & Jopp, 2002). Several researchers have argued that a comprehensive model of well-being must take into consideration both objective and subjective evaluations (Cummins, 2000). Whilst objective conditions influence subjective evaluations of well-being, they are not necessarily definitive of subjective

well-being. Therefore, others argue, a dominant focus on the latter is apposite (Diener, 2000; Netuveli & Blane, 2008).

**Subjective well-being**

In a comprehensive review of the subjective well-being literature, Diener (1984) suggested that subjective well-being has been defined by a plethora of idiosyncratic meanings. However, it was found to broadly consist of three concepts: the leading of a virtuous life, one's own evaluation of what constitutes a good life and a preponderance of positive affect over negative affect. Diener concludes that the latter two concepts have been the focus of well-being research, and in particular how these relate to one another. The World Health Organisation (1993) has emphasised the importance of considering the cultural context in which these evaluations are formed and regarded. Diener, Sapyta and Suh (1998) have argued that as people's subjective well-being is dependent on life circumstances, it is likely to vary throughout a person's life. Thus, how a young person regards well-being is likely to differ from the way an older person conceptualises well-being.

**Well-being as defined by old people**

Several recent studies have investigated which aspects of life are viewed by old people as being central to well-being. Of major significance are access to family, social and supportive relations, good health and functional ability, access to interesting activities, and financial security (Borglin, Edberg, & Hallberg, 2005; Farquhar, 1995; Gabriel & Bowling, 2004; Wilhelmson, Andersson, Waern, & Allebeck, 2005). Talking about one's

life-story narrative has also been shown to increase levels of self-reported well-being (Borglin et al., 2005). Further, living in one's own home (Wilhelmson et al., 2005) and having access to a neighbourly community with local facilities and services were highly valued as well as feeling that one has a role and identity in society (Gabriel & Bowling, 2004). Although it is clear that many of the aspects of well-being important for old people have objective, even physical, properties, it is argued that the way in which old people *subjectively* interpret these aspects will reflect their overall reported well-being.

**Aim**

This paper aims to systematically review measures of well-being in older populations. Specifically, the paper compares and contrasts standardised measures that investigate subjective and psychological well-being in older people. In particular, the focus of this review will be to investigate the way in which measures of well-being have defined and understood the concept, and whether they have incorporated aspects of well-being important to older people.

## Method

**Search 1:**

To identify all standardised measures of psychological well-being that have been used with an older population, a systematic search of four different databases was conducted: Web of Science, ASSIA, and Ovid's Medline and PsychInfo. An overview of the literature on well-being revealed an inter-changeable use of the terms quality of life and life satisfaction (Kahn & Juster, 2002; Nuteveli & Blane, 2008) to also refer to well-

being. Searches were therefore performed on all of these terms across all records stored within the databases until March 2009. Figure 1.1 outlines the search terms used. Only peer reviewed journal articles published in the English language were included.

(measur* OR assess* OR question*) AND (psycholog*) AND ("quality of life" OR "well-being" OR "wellbeing" OR "life satisfaction") AND (elder* OR ageing OR "older adults" OR "older people")

Figure 1.1: Search terms used for the database searches

As the search terms dictate, the preliminary goal was to identify psychological research measuring, assessing or questioning quality of life, well-being and life satisfaction in older adults. The initial search resulted in 341 research papers. Inclusion and exclusion criteria, outlined in Table 1.1, were then applied to the 341 references. In terms of the population sought, papers were included if they were in English, focused specifically on older adults (50 years and older) or contained a defined subgroup of older adults (50 years and older). The intervention used in the research paper had to be related to a quantitative measure of well-being (and/or 'quality of life' and 'life satisfaction' as above), be generic, subjective (e.g. individuals' own view of their well-being) and have a psychological focus. In accordance with the aims of the current review, a large number of papers were excluded due to their focus on well-being from a medical or disease-specific standpoint. Further, included studies were quantitative and with psychological well-being outcomes evaluated psychometrically (e.g. generic).

Table 1.1: Inclusion and exclusion criteria for the systematic literature search

| Inclusion criteria | |
|---|---|
| *Population:* | English speaking<br>Older adult (50 plus years of age) focus OR<br>Defined older adult sub-group within population |
| *Intervention:* | Measure of well-being/life satisfaction/quality of life<br><br>Generic<br>Subjective<br>Psychological focus (at least half of questions are psychological in nature) |
| *Outcome:* | Psychometrically evaluated |
| *Study type:* | Quantitative |
| *Exclusion:* | Disease-specific or concerned with of ill-health (presence or absence)<br><br>Concerned with symptoms of mental ill-health (presence or absence)<br><br>Involves interview-phase<br><br>Defines well-being as related to activity participation |

Applying the inclusion/exclusion criteria identified six measures concerned with psychological and subjective well-being; the Positive And Negative Affect Schedule (PANAS; Watson, Clark & Tellegen, 1988), the Life Satisfaction Index (LSI; Neugarten, Havighurst & Tobin, 1961), the Bradburn Affect Balance Scale (ABS; Bradburn, 1969),

Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen & Griffin, 1985), the Perceived Well-Being Scale (PWB; Reker & Wong, 1984), and the Scales of Psychological Well-Being (SPWB; Ryff, 1989).

**Search 2:**

These six measures were in turn entered into the databases to elicit further references concerned with revising or reviewing their psychometric properties, or with testing their suitability with older populations in particular. The second search elicited two additional measures, the Warwick Edinburgh Mental Well-Being Scale (WEMWBS, Tennant et al., 2007) and the Memorial University of Newfoundland Scale of Happiness (MUNSH). These two measures were therefore added to the final list of measures. On completion of the search process (Figure 1.2) the final list of measures included in the current study are presented in Table 1.2.

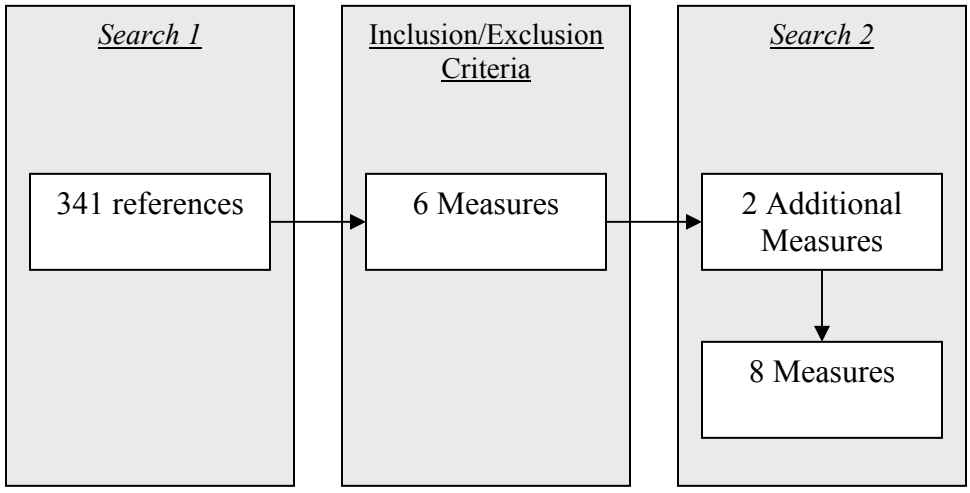


Figure 1.2: Overview of the search process adopted in the present study

Table 1.2: Measures included in the review

| Measures | Source | Items | Subscales | Psychometric Properties |
|---|---|---|---|---|
| The Positive And Negative Affect Schedule **(PANAS)** | Watson, Clark & Tellegen (1988) | 20 | Positive affect<br>Negative affect | Test-retest ($r$ = 0.39 to 0.71)<br>Internal consistency ($\alpha$ = 0.84 to 0.90)<br>Inter-scale correlation ($r$ = -0.12 to -0.23) |
| Life Satisfaction Index **(LSI-A)** | Neugarten, Havighurst & Tobin (1961) | 20 | Zest vs. apathy<br>Resolution and fortitude<br>Goal congruence<br>Positive self-concept<br>Mood tone | Test-retest (not available)<br>Internal consistency (not available)<br>Inter-scale correlation ($r$ = 0.48 to 0.84) |
| Affect Balance Scale **(ABS)** | Bradburn (1969) | 10 | Positive affect<br>Negative affect | Test-retest ($r$ = 0.76)<br>Internal consistency ($\alpha$ = 0.55 to 0.73)<br>Inter-scale correlation ($r$ = 0.04 to 0.15) |
| The Warwick Edinburgh Mental Well-Being Scale **(WEMWBS)** | Tennant et al. (2007) | 14 | Positive mental health | Test-retest ($r$ = 0.83)<br>Internal consistency ($\alpha$ = 0.89 to 0.91) |
| Scales of Psychological Well-Being **(SPWB)** | Ryff (1989) | 120 | Self-acceptance<br>Positive relations with others<br>Autonomy<br>Environmental mastery<br>Purpose in life<br>Personal growth | Test-retest ($r$ = 0.81 to 0.85)<br>Internal consistency ($\alpha$ = 0.86 to 0.93)<br>Inter-scale correlation ($r$ = 0.32 to 0.76) |
| Satisfaction with Life Scale **(SWLS)** | Diener, Emmons, Larsen & Griffin (1985) | 5 | Life satisfaction | Test-retest ($r$ = 0.82)<br>Internal consistency ($\alpha$ = 0.57 to 0.67) |
| Perceived Well-Being Scale **(PWB)** | Reker & Wong (1984) | 14 | Perceived psychological health<br>Perceived physical health | Test-retest ($r$ = 0.65 to 0.79)<br>Internal consistency (not available)<br>Inter-scale correlation ($r$ = 0.32) |
| Memorial University of Newfoundland Scale of Happiness **(MUNSH)** | Kozma & Stones (1980) | 24 | Positive affect<br>Negative affect<br>General positive experiences<br>General negative experiences | Test-retest ($r$ = 0.70)<br>Internal consistency ($\alpha$ = 0.86)<br>Inter-scale correlation (not available) |

**Description of measures**

*The Affect Balance Scale*

The Affect Balance Scale (ABS; Bradburn, 1969) requires participants to state their agreement or disagreement with 10 statements. It defines well-being as being concerned with positive affect (measured by the 5-item Positive Affect Scale, PAS), negative affect (measured by the 5-item Negative Affect Scale, NAS), and the balance between the two (ABS). Whilst the PAS looks at interests, pride, achievements, general happiness and contentedness with life, the NAS is concerned with feelings of restlessness, isolation, boredom, unhappiness, and feelings of being criticised by others. Bradburn (1969) argued that positive affect and negative affect are independent constructs which both separately relate to the overall psychological well-being of individuals. Although originally developed for use on a younger sample, the applicability of the ABS with older samples has been assessed (e.g. Benin, Stock, & Okun, 1988; Maitland, Dixon, Hultsch, & Hertzog, 2001; Moriwaki, 1974), hence making it relevant to the current review. Its applicability has also been assessed cross-culturally (e.g. Devins, Beiser, Dion, Pelletier, & Edwards, 1997; Harding, 1982; MacIntosh, 1998).

Reliability and validity Bradburn (1969) reported good test-retest reliability ($r$ = 0.76) over a three-day period and concluded that the two scales showed an acceptable internal consistency ($\alpha$ = 0.55-0.73). Further, a low association between the two scales ($r$ = 0.04-0.15) supported the notion that the PAS and the NAS measure separate constructs. Harding (1982) found support for Bradburn's measure using a British sample, reporting acceptable internal consistency ($\alpha$ = 0.59-0.65) and non-significant association between the two scales ($r$ = 0.002).

Criticism of the ABS has pointed to the fact that ABS is derived by subtracting NAS from the PAS, thus implying that they are not separate concepts (van Schuur & Kruijtbosch, 1995). In fact, some studies have reported an association between the NAS and the PAS (e.g. Kammann, Farry, & Herbison, 1984), in particular when using an old-age sample (Benin et al., 1988), indicating that the ABS may be better described as a uni-dimensional measure. Further, MacIntosh (1998) concluded that as many as four factors were required to explain the data in the World Values Survey, which incorporated more than 50,000 participants in 38 different countries.

Finally, several studies have argued that only limited domains of positive and negative affect are represented in the ABS, arguing that the ABS may lack validity due to poor content sampling (Diener & Emmons, 1984). Further, the utility of the ABS with older people has been questioned following the conclusion by Connidis (1984) that several items carried negative connotations and hence, due to the pressures of social desirability, were disagreed with, irrespective of the individual's actual feelings. For example, several of the elderly in Connidis' sample stated that they disagreed with the question "*Proud because someone complimented you on something you have done?*" because the notion of pride carried a negative meaning. This has resulted in some subsequent studies opting for a removal of items that might carry a negative meaning for some individuals or cultures (Devins et al., 1997), posing further challenges to its ability to fully capture all aspects influencing well-being.

*The Warwick Edinburgh Mental Well-Being Scale*

The Warwick Edinburgh Mental Well-Being Scale (WEMWBS; Tennant et al., 2007) was recently developed in the UK as a tool to assess public and individual mental well-being. As such, it was developed as part of The National Programme for improving awareness and mental well-being in Scotland (Smith-Merry, 2008). It incorporates 14 positively worded items concerned with a single-factor of positive mental health, including hedonic (i.e. pleasure attainment and happiness) and eudaimonic (i.e. the meaning people assign to experiences, self-realisation, and positive functioning) well-being. Participants are instructed to consider their situation over the previous two-weeks and indicate to what degree they agree with statements on a five-point scale. As the sample in Tennant et al.'s (2007) study incorporated a sub-group of individuals 55 years and over, the WEMWBS was included in the present review.

Reliability and validity Tennant et al. (2007) concluded that the WEMWBS had a high test-retest reliability ($r = 0.83$) and internal consistency ($\alpha = 0.89$-$0.91$). They also reported confirmatory factor analytical support for their proposed single-factor model. The authors evaluated convergent validity against four positive well-being measures and three physical and mental well-being measures. They concluded that the WEMWBS correlated to expected measures, ranging from 0.43 to 0.77.

The high internal consistency values prompted the authors to suggest that some items might be redundant. To test this, they dropped items from the analyses to investigate the number of items needed to achieve a Cronbachs's alpha value of 0.80. They found that only six out of the original 14 items were needed to achieve this value (Tennant et al., 2007). Similarly, Stewart-Brown et al. (2009) found that only 7 of the

original 14 items were reliable under Rasch modelling and that several of the unreliable items were also biased by gender. As a consequence, a shorter 7-item uni-dimensional version of the WEMWBS was developed (The Short Warwick Edinburgh Mental Well-being Scale, SWEMWBS). Analysis indicated high association between the WEMWBS and the SWEMWBS ($\rho = 0.95$). However, the authors conclude that the SWEMWBS offers a more limited assessment of well-being, especially since several items concerned with hedonic well-being were removed. This is notable as several researchers have argued that hedonic and eudaimonic well-being are separate concepts (Kopperud & Vittersø, 2008; Ryan & Deci, 2001). Nevertheless, Stewart-Brown et al. (2009) suggest that the robust measurement properties of the SWEMWBS make it preferable to WEMWBS for monitoring well-being. Yet they do concede that "when face validity is an issue there remains arguments for continuing to collect data on the full 14 item WEMWBS" (p.1).

*The Positive and Negative Affect Schedule*

Watson, Clark, and Tellegen (1988) developed The Positive and Negative Affect Schedule (PANAS) following research which supported the notion of separate positive and negative affect scales. The PANAS comprises two 10-item mood scales, positive and negative affect, and respondents are requested to indicate on a five-point scale to what extent they have experienced each mood or emotion during a specified time period. The PA scale focuses on items relating to alertness, enthusiasm, interest, strength, and attentiveness, whilst the NA scale focuses on items relating to fear, distress, nervousness, shame and irritability. Watson et al. (1988) derived these specific items by factor

analysing general population responses on lists of descriptors, or adjectives, and selecting the ones with strong primary loadings on either factor. The utility of the PANAS with old-age samples was established by Kercher (1992).

Reliability and validity Watson et al. (1988) reported test-retest values ranging from 0.39-0.71 depending on the time frame that participants were asked to consider (for example 'today' or 'last year'). Watson et al. (1988) further reported high internal consistency for both the PA ($\alpha$ = 0.86-0.90) and the NA ($\alpha$ = 0.84-0.87) scales. They also reported a quasi-interdependence between the two scales ($r$ = -0.12 to -0.23). Further, Watson et al. reported moderate correlations to the Beck Depression Inventory (-0.35 for PA, 0.56 for NA) and the State-Trait Anxiety Inventory (-.035 for PA, 0.51 for NA). Kercher (1992) developed a short version of the PANAS by choosing items with the highest factor loadings, and assessed its utility with elderly populations. Kercher concluded that his two 5-item scales support the notion that PA and NA are separate constructs and that the short PANAS is a viable measure of well-being in older adults.

Mackinnon et al. (1999) have argued that items in the NA scale of Kercher's short form display high intercorrelations. When examining these items, they concluded that four of the five items are pairs with intrinsically similar meanings (e.g. scared and afraid, distressed and upset). Hence, their utility for adding meaning to the concept of NA, they argue, must be questioned.

*Scales of Psychological Well-Being*

Ryff (1989) reviewed the literature on well-being and concluded that a multi-dimensional approach to well-being is needed to capture its full meaning. By integrating ideas and

theories from the mental health, clinical, and life span literature, Ryff concluded that well-being is comprised of six separate concepts: self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Using these concepts as a framework, Ryff developed the Scales of Psychological Well-Being (SPWB). The original SPWB incorporates 20 items per construct and utilises a six-point Likert scale. Ryff included a sub-group of older adults in the development of the SPWB. Shorter versions of the original scale have later been proposed, including 14 (Ryff, Lee, Essex, & Schmutte, 1994) and 3 items per scale (Ryff & Keyes, 1995).

Reliability and validity Ryff (1989) reported good test-retest reliability for all six dimensions (ranging from 0.81-0.85) over a six week period. Internal consistency for all scales was also high ($\alpha$= 0.86-0.93). Ryff further reported correlations of the SPWB to six measures of related concepts, ranging from 0.32 to 0.72. Intercorrelations between scales were reported to range from 0.32 to 0.76, with high intercorrelations between self-acceptance and environmental mastery (0.76) self-acceptance and purpose in life (0.72), and purpose in life and personal growth (0.72), indicating an overlap between these scales. Ryff et al. (1994) reported similar values for the 14-item-per subscale version, which was also reported to be highly associated with the original 20-item-per-subscale version ($\rho$ = 0.97). Van Dierendonck (2005) concluded that whilst the 3-item-per-subscale version revealed the best factorial validity (i.e. least overlap between scales), the internal consistency of this measure was below acceptable levels ($\alpha$ = 0.17-0.68) and should therefore not be used.

Criticism of the SPWB has focused on the high inter-correlations reported between different dimensions. Clarke, Marshall, Ryff, and Wheaton (2001) concluded

that whilst there was an overlap between some of the dimensions their data still supported the multi-dimensionality proposed by Ryff (1989). Conversely, Kafka and Kozma (2002) concluded that their data indicated a three-factor solution, which did not tap the original dimensions. Springer and Hauser (2006a, 2006b) argue that until the issue of the seemingly high intercorrelations between personal growth, purpose in life, self-acceptance, and environmental mastery has been solved, the validity of the SPWB is disputed.

*The Life Satisfaction Index*

One of the measures with has been widely cited in the literature assessing successful aging in older people is the Life Satisfaction Index (LSI; Neugarten, Havighurst, & Tobin, 1961). Neugarten et al. defined psychological well-being as a multi-dimensional concept involving zest, resolution and fortitude, congruence between desired and achieved goals, positive self concept, and mood tone. Based on this framework, they developed the Life Satisfaction Ratings (LSI-A and LSI-B), of which the LSI-A uses self-report and the LSI-B involves an interview. Hence, only the LSI-A was considered in the current review. The LSI-A incorporates 20 items, which are scored on a three-point scale.

Reliability and validity Overall, limited psychometric information has been presented for the LSI. Neugarten et al. (1961) reported no test-retest, internal consistency, or convergent validity values. They did report high inter-correlations between their five factors ($\alpha$ = 0.48-0.84), particularly between self concept and resolution (0.83), zest and mood (0.84), and self concept and mood (0.82). Several papers have investigated the factor structure of the LSI and have failed to find five separate concepts (Adams, 1969;

Bigot, 1974; Hermes, Goffin, & Chrisjohn, 1998; Hoyt & Creech, 1983; James, Davies, & Ananthakopan, 1986; Liang, van Tran, & Markides, 1988; Wilson, Elias, & Brownlee, 1985; Wood, Wylie, & Sheafor, 1969). As a result, several different versions of the LSI have been suggested, including the 13-item LSI-Z (Wood et al., 1969), the two-factor 8-item LSI-W, which was standardised on a British sample (Bigot, 1974), a three-factor version containing 7 items (Liang et al., 1988), a three-factor version containing 8 items (Hoyt & Creech, 1983), and a four-factor solution containing 18 items (Adams, 1969). In their review of the LSI, Wallace and Wheeler (2002) conclude that most studies adopting the LSI have opted to report participants' overall questionnaire score rather than the individual scale scores. Until a homogenous framework has been agreed, it is argued that the results of the LSI are used cautiously with greater emphasis placed on overall questionnaire score (e.g. well-being) rather than on an individual's scores on the subscales or factors, since these may be contentious or misleading.

*Satisfaction with Life Scale*

Diener, Emmons, Larsen and Griffin (1985) developed a multi-item scale measuring life satisfaction. They named their five-item measure the Satisfaction with Life Scale (SWLS). Items cover issues around global satisfaction with life, conditions, and whether respondents would change life experiences if given the opportunity. Respondents are requested to state their agreement to items on a seven-point Likert scale. Whilst the SWLS was originally developed on a student population, its utility with an older sample has also been evaluated (Diener, et al., 1985).

Reliability and validity Diener et al. (1985) reported a test-retest correlation over a two-month period of 0.82. A single-factor solution (explaining 66% of the variance) supported the framework suggested. Inter-item correlations were in the acceptable range ($\alpha$ = 0.57-0.67). Pavot, Diener, Colvin, and Sandvik (1991) reported similar values ($\alpha$= 0.55-0.80). Pavot and Diener (1993) further reported a temporal stability over a four-year period of 0.54, which they argued support the scale's sensitivity to clinical change over time. Pavot et al. (1991) reported a significant correlation between the SWLS and the LSI-A of 0.81.

The SWLS is a useful and psychometrically valid measure of life satisfaction. Critics argue that it only incorporates one aspect of life satisfaction, namely the cognitive component and thus fails to consider the affective element of well-being (Schiaffino, 2003).

*Perceived Well-Being Scale*

Reker and Wong (1984) argued that well-being in the elderly is best understood by considering people's perceptions of their psychological and physical status. They developed the Perceived Well-Being Scale (PWB) which measures these two components. The aggregate of the two is referred to as general well-being. The PWB consists of 14 items, and participants are asked to indicate their agreement to statements using a seven-point Likert scale. Items in the psychological well-being scale are concerned with boredom, excitement, apathy, and purposefulness whereas items in the physical health component regard ability to stand physical strain, tiredness, appetite, deterioration of health, and physical complaints.

Reliability and validity Test-retest correlations over a two-year period were reported at 0.65 for physical well-being and 0.79 for psychological well-being. A factorial solution supported the notion that psychological and physical well-being were distinct concepts, and these only inter-correlated moderately ($r$ = 0.32; Reker & Wong, 1984). Further, Reker and Wong concluded that the PWB correlated significantly to the MUNSH (0.54-0.61) and the Beck Depression Inventory (-0.37 to -0.55). A revised version containing 16 items has since been developed, however no psychometrics for this version have been published (Reker, personal communication, 2009).

*The Memorial University of Newfoundland Scale of Happiness*

Following criticism regarding the limited sampling of the ABS and questions regarding its applicability to older adults, Kozma and Stones (1980) developed the Memorial University of Newfoundland Scale of Happiness (MUNSH). They argued that whilst literature supported the notion that positive and negative affect influence someone's perceived and reported well-being, aspects of a person's perceived positive and negative life experiences are equally influential in older adults. Subsequently, they utilised the theoretical underpinning of items from the ABS, which measure positive and negative affect, and the LSI-Z, which incorporates items concerned with positive and negative emotive experiences. The resulting scale includes four indices; positive affect (PA), negative affect (NA), general positive experiences (PE), and general negative experiences (NE). The MUNSH contains 24 items, to which respondents are instructed to indicate their agreement using a yes/no format.

Reliability and validity Kozma and Stones (1980) reported a test-retest reliability value of 0.70 over a six-month to a year interval. They reported good overall internal consistency ($\alpha = 0.86$). Stones and Kozma (1985) investigated the cross-validity of the MUNSH compared to the ABS and the LSI-Z using a single factor confirmatory analysis. They concluded that the combined scales accounted for 64% of the variance in determining positive well-being, with the MUNSH loading the highest (0.99) on to the single factor solution. However, in their study Stones and Kozma (1985) further analysed seven additional datasets, yet did not report a comparison of the overall MUNSH scale in any other of the data sets analysed. This may cast doubt over the generalisability of the factor loading and cross-validity results reported by Stones and Kozma (1985). Additionally, as mentioned previously, there may be problems with the validity of the ABS and the LSI-Z, thus also casting doubt over the utility of using these scales for cross-validation.

## Discussion

The following discussion will address the two main hypotheses presented in the aims of the paper. Firstly, the question of whether measures of well-being offer consistency in the way in which they define and conceptualise well-being in older adults will be discussed. Secondly, whether the theoretical underpinning of these measures reflects the way in which older people themselves define well-being will be considered. Finally, a synthesis of the findings will be presented in the context of the existing literature within the psychological research and measurement of well being in older adults.

**Is there a consistency in the way that subjective well-being is being measured in older adults?**

The results of the current review suggest that the concept of subjective well-being in older adults is poorly defined. There is large variability in the way well-being is measured in terms of its: a) derivation from affect and/or cognitive evaluations, b) dimensionality and composition and c) psychometric properties.

*A) Well-being as an affective state versus cognitive evaluation*

The eight measures reviewed in the current paper focused on well-being as defined by either affective states, cognitive evaluations of one's life, or some combination of the two. This largely parallels present academic and clinical understanding of positive mental health in that it is a complex construct covering both mood and psychological functioning. In fact, well-being is widely recognised (e.g. Kahn & Juster, 2002; Kopperud & Vittersø, 2008; Lawton, 1983) as comprising two distinct perspectives: the hedonic perspective, focusing primarily on the experience of happiness and pleasure attainment (i.e. affective states), and the eudaimonic perspective, which focuses on psychological evaluation and self-realisation (i.e. cognitive evaluation).

Measures primarily concerned with hedonic, or affective, mood are the ABS and the PANAS, which utilise the *presence* of *positive* emotions and *absence* of *negative* emotions as indicative of well-being. Common for these measures is the assumption that a preponderance of positive over negative affect results in subjective well-being. Hence, the more positive a person reports feeling, the better their well-being is concluded to be. Only one measure, the SWLS, focused solely on a eudaimonic, or cognitive, evaluation

of well-being. The SWLS focused primarily on an older person's global satisfaction with life in terms of its subjective measurement (e.g. "the conditions of my life are excellent").

More commonly well-being was conceptualised and defined as a mixture of affective and cognitive evaluations of a person's well-being. The PWB, SPWB, LSI, and the WEMWBS all theorised that well-being is an overall combination of hedonic and eudaimonic well-being. Although similar in its treatment of well-being, as it adopts a mixture of affective and cognitive elements, the MUNSH differed from the others in that it separated affect and cognitive experiences of well-being, treating them as independent constructs.

*B) Dimensionality (number of dimensions) and composition (type of dimensions)*

The systematic literature review identified that overall there is general disagreement among researchers on the number and type of dimensions comprising well-being in older adults (George, 1981). The measures in the present study were found to range from one to six dimensions in defining well-being. The WEMWBS used one dimension of positive mental health, although this dimension does in fact include both hedonic and eudaimonic well-being. The SWLS used one dimension of global life satisfaction, largely ignoring affective mood as a composite dimension of well-being. The ABS and the PANAS both used two dimensions: positive and negative affect. The PWB scale also utilised two dimensions, but these involved a person's perceived psychological and physical well-being. The MUNSH comprised four dimensions; positive and negative affect, and positive and negative experiences (e.g. cognitive evaluations). The LSI-A used five dimensions to define well-being; zest, fortitude, congruence between desired and

achieved goals, positive self-concept, and mood tone. Finally, the SPWB used six dimensions; self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth to define well-being. The range of dimensionality, interpretation of dimensions and the composition of those dimensions was markedly different between the measures identified in the review suggesting that well-being as a psychological concept is indeed difficult to define.

Differing interpretations of the definition of well-being not only exist across the various measures but are also evident in the composition of items within each individual measure, investigated in numerous validation studies. For example, the extent to which specific items in a measure have been found to consistently relate to specific dimensions of well-being have been questioned (e.g. Benin et al., 1988; Crawford & Henry, 2004; Kafka & Kozma, 2002; Liang et al., 1988; Stewart-Brown et al., 2009). This has resulted in studies reporting low internal consistency, and/or cross-cultural validity (e.g. Bigot, 1974; Connidis, 1984; MacIntosh, 1998). Although studies generally have found contradictory evidence for the internal consistency of items, attempts to validate the LSI-A have resulted in a large number of alternative factorial solutions. Helmes, et al. (1998) report that at least 10 studies testing the factorial solution of the LSI-A have found differing numbers of factors (e.g. dimensions) with differing composition. For example, Bigot (1974) concluded that data from the LSI-A could be best interpreted as simply a two-factor solution involving the concepts of acceptance-contentment and achievement-fulfilment.

At present, no alternative factorial solutions have been proposed for the WEMWBS, or SWLS, which perhaps is explained by them being uni-dimensional

measures. Nevertheless, they have not escaped criticism within the academic literature. Both the WEMWBS and the SWLS have been criticised for not fully capturing the broad conceptualisation of well-being (Schiaffino, 2003; Stewart-Brown et al., 2009). The PWB has not had any published evaluations.

*C) Psychometric properties of identified measures*

All of the measures under study were found to have adequate reliability and validity in their original versions. However, numerous evaluative studies, as described above, have been conducted with the majority of these measures, with a vast number of studies reporting poor internal consistency of items, scales and factors. It is postulated that there may be several reasons why these subsequent studies have found little support for the initial psychometric properties reported by the authors in their original studies. Firstly, well-being has been reported to be dynamic in nature, with ratings of well being changing within individual subjects depending on current circumstances (Diener et al., 1998). Clearly, the dynamic aspect of well-being is likely to be more pronounced in affective items, such as "I feel happy", than in more cognitive, global items, such as "I think I am usually a happy person". Therefore, items relating to affective concepts of well-being may be influenced by short-term changes in affect, more so than items relating to more long-term cognitive and psychological aspects of well-being. Secondly, variations in findings across studies may relate to differences between the populations under scrutiny. Thus, even in evaluative studies where age has been kept a relative constant, additional demographics might have differed, such as socio-economic status (Larson, 1978), marital status (Wood, Rhodes, & Whelan, 1989), and cognitive or physical functioning (Pinquart

& Sörensen, 2000), which have all been found to impact on subjective well-being. This might explain the differing results reported by some validation studies. Thirdly, methodological variations may have led to differing factorial solutions across studies: for example, elderly people are more likely to rate absence of negative affect as indicative of positive well-being compared to younger respondents (Zautra, Guarnaccia, & Reich, 1988). Thus, bipolarity of dimensions of well-being might be assumed by some respondents but not by others. This poses significant challenges for the way in which measures, and in particular response formats, are designed (Russell & Carroll, 1999)

Overall the measures collected from a systematic search of the literature suggest that there is a greatly varied opinion among researchers in how well-being in older adults should be defined in terms of its dimensionality, composition and psychometric structure. Attention will now be drawn to the question of whether measures capture aspects of well-being important to old people

**Do measures consider the way old people themselves define well-being?**

Generally, the measures identified in this review all consider several important aspects of well-being, but it is unlikely, due to the problems identified above, that anyone one measure considers them all. Of significant importance for measures to assert validity is that they include dimensions identified by old people as paramount for well-being. A consideration of how well the measures under review capture these is therefore imperative.

Old people have identified relationships, health and functioning, access to interests and activities, financial security, safe and neighbourly home environment, and

purposeful existence as important for successful aging (Borglin et al., 2005; Farquhar, 1995; Gabriel & Bowling, 2004; Wilhelmson et al., 2005). Noteworthy, is the range in dimensionality and composition of these aspects. Whilst health, opportunities for interesting and rewarding activities, and financial security can arguably be objectively assessed by others, relationships, neighbourly environment, and purposefulness are more subjective notions with each individual assigning their own meaning to what these constitute. Nevertheless, the more 'objective' aspects, such as health, available activities, and financial security can be interpreted subjectively by individuals in great contrast to a third-person's 'objective' viewpoint (Maddox & Douglass, 1973). An appraisal of these concepts also suggests that the way well-being is conceptualised by older people involves some combination of happiness and pleasure attainment (e.g. affective states) and the eudaimonic perspective which focuses on psychological evaluation and self-realisation.

As already discussed, measures concerned with a combination of affective and cognitive evaluations of one's life included the PWB, SPWB, LSI-A, and the WEMWBS. Of these, the LSI-A and SPWB are multi-dimensional and cover a range of dimensions thought to be associated with well-being. All in all, both these measures capture a number of the dimensions identified in the literature as important to old people: the SPWB taps into relationships, health and functioning, access to interesting activities, independent living and purpose in life, while the LSI-A taps into health and functioning, access to interesting activities, and purposeful existence. Whilst all measures in this review to a degree tap into some of the concepts described above, the SPWB and the LSI-A offer the most diverse understanding of the complexity of well-being. However, as highlighted

above, the structural composite of these measures have often been difficult to replicate. Hence, the debate on how well-being is defined, understood and measured continues.

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# Paper 2: The Development and Validation of the Well-being Assessment Schedule for Older People

**Abstract**

The present study utilised the ecosystemic model of well-being proposed by Papadopoulos, Biggs, and Tinker (2009) that argues that well-being is comprised of six dimensions: integrity of self, integrity of others, enrichment, sense of agency, belonging, and security. Utilising the narratives from the old people in the Papadopoulos et al. sample, a questionnaire was developed, the Well-being Assessment Schedule for Older People. A total of 98 participants formed the study sample. Reliability analysis revealed excellent test-retest values and internal consistency for a 51-item measure. A principal component factorial analysis revealed that 39 items could be conceptually explained by three factors: belonging, purposefulness, and integrity of self. Limitations of the current study, together with suggestions for further validation of the Well-being Assessment Schedule for Older People are discussed.

## Introduction

With more people reaching old age, the study of what constitutes successful aging has received significant attention (Baltes & Baltes, 1990). Early studies focused predominantly on understanding successful ageing as constituting the absence of dysfunction (e.g. Bookwala, Harralson, & Parmelle, 2003) but more recent research has become more concerned with positive aspects of functioning, a shift of perspective that has been welcomed (Seligman, Steen, Park, & Peterson, 2005). Generally, the study of well-being has either looked at hedonic aspects of well-being which are mainly concerned with pleasure attainment, or eudaimonic aspects of well-being which are concerned with self-actualisation and achievements (Ryan & Decci, 2003). In particular, the way that people themselves rate their welfare, known as subjective well-being, has been at the centre of the well-being literature (Diener, 1984). The assumption of these approaches is that the individual is the only reliable judge of his or her own well-being.

Despite significant attempts, the essential components of well-being and how they are measures are still being debated. Some earlier research defined well-being as the balance between positive and negative affect (Bradburn, 1969; Kozma & Stones, 1980; Watson, Clark, & Tellegen, 1988). These approaches stipulated that people are well when they report more positive than negative affect. The debate around these approaches has been concerned with whether positive and negative affect are independent constructs or whether they are in fact bipolar measures of the same underlying dimension (e.g. Kammann, Farry, & Herbison, 1984). Further, whilst these approaches were useful for assessing people's well-being and happiness, they offered little information about the dimensions important for the development of positive or negative affect. Thus, just

knowing that someone is happy does not offer information on aspects important for happiness.

Other approaches have sought to develop and define dimensions that impact on well-being. The challenge for these approaches has been to capture dimensions that are important for people from different walks of life and demographics. Life circumstances (Diener, Sapyta & Suh, 1998) financial resources (Diener & Biswas-Diener (2004), age (Ryff & Keyes, 1995) and identity (Thoits, 1992), for example, have all been found to impact on perceived well-being. Thus, for a theoretical model to reliably capture well-being, it must incorporate aspects that resonate with a majority of people.

One of the earliest and most cited approaches to measuring well-being was developed by Neugarten, Havighurst, and Tobin (1961). They argued that there were five essential features for well-being; zest, resolution and fortitude, congruence between desired and achieved goals, positive self-concept, and mood. These features formed the basis for their Life Satisfaction Index – A (LSI-A). The five proposed dimensions of well-being were identified by examining measures concerned with related concepts (e.g. morale), and working definitions of these dimensions were developed. They defined *zest* as an enthusiasm for activities and life. The absence of zest, they argued, was apathy. *Resolution and fortitude* was defined as the extent to which an individual accepts personal responsibility for his or her life and feels that he or she can influence things for the better. People with low resolution were thought to score highly on resignation. People who reported having achieved what they felt important were described as having *congruence between desired and achieved goals*. *Positive self-concept* was concerned with individuals who regard themselves and their achievements positively. Low scorers

on this dimension reported feeling old, weak, useless, and incompetent. The fifth dimension concerned *mood tone*. It was defined as people expressing happy and optimistic attitudes about life, people, and themselves. Low scorers would express feeling low, irritable or bitter.

The LSI has been used widely in well-being research since its introduction and, as such, has formed the basis for the way in which well-being is now considered and conceptualised. However, despite its influence, several studies identify problems with the five original dimensions of the LSI-A, concluding that well-being may be better understood by two dimensions of acceptance–contentment and achievement-fulfilment (Bigot, 1974; Hermes, Goffin, & Chrisjohn, 1998; James, Davies, & Anathakopan, 1986). Yet other researchers have focused on the participants' overall score, rather than scores on individual dimensions, interpreting the measure uni-dimensionally (Wallace & Wheeler, 2002). Therefore, although the LSI may reliably measure well-being it is unclear whether Neugarten et al.'s (1961) original interpretation of dimensionality is succinct, begging the question of what, if any, psycho-social dimensions make up well-being as a construct.

Ryff (1989) argued that well-being should be defined through a careful review and synthesis of the theory-led literature on well-being across disciplines. Ryff integrated literature from the mental health, clinical, and life span fields, and concluded that the essential features of well-being have been described in conceptually similar ways. Ryff identified six major dimensions of well-being; s*elf-acceptance*, which was the most recurrent dimension in Ryff's review, concerned positive attitudes towards oneself and one's life. *Positive relations to others*, including trust, love, and empathy, was concluded

to consistently relate to positive mental health. *Autonomy* was described as the ability to evaluate one's life based on internal standards and to live an independent life. *Environmental mastery* describes the way an individual takes advantage of, and is able to adjust to changes in, their environment. *Purpose in life* was determined by an individual's sense of meaning and the extent to which they were directed by some sense of goals or intentions. Finally, *personal growth* was concerned with an individual's openness to experiences and an active pursuit of reaching one's full potential.

In order to measure well-being across these six-dimensions, Ryff developed the Scales of Psychological Well-Being (SPWB), a questionnaire of 120 items. The SPWB has impacted significantly on the way well-being has been considered, not least for the way that it integrates literature from different schools of thought (Ryff & Singer, 2006). Further, its impact on shifting the emphasis on well-being away from more traditional foci, as discussed above, cannot be over-estimated (Springer & Hauser, 2006). However, similarly to the LSI-A, SPWB's critics argue that the six dimensions proposed by Ryff have been difficult to replicate (Springer & Hauser, 2006). Although, again, the dimensionality of well-being is questionable, the SPWB, due to its integrated approach, remains an important measure for understanding the psycho-social features of well-being.

Recent attention given to well-being in the elderly, has argued for the importance of narrative-driven rather then theory-driven approaches (Gabriel & Bowling, 2004). Several recent studies have interviewed older people to more directly ascertain older adults' own definitions of well-being and aspects associated with it (Borglin, Edberg, & Hallberg, 2005; Farquhar, 1995; Gabriel & Bowling, 2004; Wilhelmson, Andersson, Waern, & Allebeck, 2005). Accordingly, a qualitative study by Papadopoulos, Biggs, and

Tinker (2009) utilised a semi-structured interview to elicit old people's views on aspects important for well-being. The questions were derived at by reviewing the current literature on well-being and by piloting these on a small sample of elderly people. The final questions involved questions relating to open reflection (e.g. "Tell me about your life at present"), reflection on current meaning (e.g. "What makes you feel happy/sad about your life?") and idealised meaning (e.g. "What would make your life better and why?"). In total, 39 older adults (mean age 74) formed the study sample, identified through three separate routes. Ten participants were identified from the main researcher's caseload as a clinical psychologist. These individuals' case files were reviewed to elicit information relating to the research questions. Nineteen participants were recruited from an older adults' research participation scheme at the University of Birmingham and ten participants were approached via a local African Caribbean Community Centre. The latter two groups were interviewed by the main researcher and the information, together with the information elicited from the case files, was analysed for themes using a grounded theory approach. Papadopoulos et al. (2009) concluded that well-being could be defined as comprising six dimensions. *Integrity of self* was defined as being related to aspects of the person (cognitive, emotional, and behavioural), which makes him or her better able to face and overcome challenges. *Integrity of others* related to the extent to which a person is concerned with and contributes to the welfare of valued others. *Belonging* is determined by a person's level of involvement in social relationships and commitments. *Sense of agency* looks at the way an individual is both able and actively involved in making decisions about the way that one's life is led. *Enrichment* defines the opportunity for an individual to engage in meaningful and interesting activities that

enrich and stimulate growth. The final dimension, *security*, was believed to relate to worries about financial, physical, and psychological vulnerability.

The aim of the present paper is to investigate the effectiveness of a questionnaire-based measure, the Well-being Assessment Schedule for Older People, utilising the narrative-led dimensions outlined by Papadopoulos et al. (2009). In fact, the narrative responses given by older adults in Papadopoulos et al.'s study were directly developed into questionnaire items which were then tested on a population of older adults. The present paper discusses the development of the questionnaire, its distribution, and analysis in order to:

1) Explore reliability and validity of the Well-being Assessment Schedule for Older People, developed from the six narrative-led dimensions proposed by Papadopoulos et al. (2009).
2) Determine the underlying factorial dimensions, if any, of the Well-being Assessment Schedule for Older People.

## Method

### Procedure

*Construction of initial questionnaire*

Using the narratives from Papadopoulos et al.'s (2009) qualitative study, Papadopoulos and Halloran (2008; unpublished) developed a 101-item questionnaire (Appendix A), directly replicating the expressed concerns, thoughts and feelings of the older adults in their qualitative study. On inspection of the 101-item questionnaire, 40 items were found to represent the narratives of less than 5%, (i.e. mentioned by only one individual) of the

sample and were thus removed. The reduction of (low frequency) items was also necessary to reduce the length of the questionnaire. The study aimed to sample approximately 100 older adults within the time-frame of the research project and thus 101-items would have caused considerable limitations under factor analytical analyses. The removal of the 40 low frequency items resulted in a 61-item questionnaire, named the Well-being Assessment Schedule for Older People (WASOP) (Appendix B). Ethical approval was then sought from the University of Birmingham to begin piloting the WASOP with a focus group of older adults.

*Focus group*

Ethical approval for the current research was granted by the University of Birmingham (see Appendix C). The 61-item version was presented to a focus group of six (4 women and 2 men) elderly people (mean age = 74, *SD* = 11.03) from an English retirement village, known to the main researcher personally, to assess readability and face validity. Permission to approach individuals was granted by the governor of the retirement village in return for mental awareness and psychological health information. The focus group members individually read through the questionnaire as if they were filling it out and made any comments on the questionnaire as they did so. The group and the author discussed the comments to resolve any issues (e.g. ambiguity, redundancies, split-meanings, etc). Following the feedback from the focus group, a few minor alterations (see Appendix D) to questionnaire item wording were made. The Flesch Reading Ease (Flesch, 1948) analysis revealed a value of 77.16, indicating that the questionnaire is easily accessible to an average 12-year-old or any persons with little formal education.

**Sample**

Once the questionnaire had been reduced to a usable length, and checked for acceptability and readability, it was piloted with a sample of people aged over 55 years, in order to validate the WASOP with older adults. The sample in the present study consisted of 101 English speaking adults above the age of 55, identified through opportunity sampling. Although, the term 'older adults' is a subjective typing, several studies investigating the well-being in older adults have used this as participant inclusion criteria (e.g. Beekman, Deeg, Braam, Smit, & Van Tiburg, 1997; Campbell & Converse, 1984; Larson, Mannell, & Zuzanek, 1986). Participants were mainly approached through a local retirement village (10 individuals), a small Anglican Church group, known to the main researcher personally (11 participants), and from an unrelated research volunteer scheme at the University of Birmingham (80 participants). Participants in this scheme attended the university for participation in unrelated research projects and were approached as they arrived in reception and introduced to the current questionnaire study. All participants were presented with information about the nature of the study and study participation (see Appendix E). Completion of the questionnaire, after reading the participation information sheet, was regarded as consent to take part in the study. Participants were given the opportunity to return the questionnaires to the researcher in stamped and addressed envelopes to ensure complete anonymity. This offer was taken up by 46 out of the 101 participants. Following Häuser, Gold, Stallmach, Caspary, and Stein (2007), who argued that participants with more than 25% of missing values should be excluded from analyses, three questionnaires were removed, resulting in a total sample of 98. The mean

age of the participants were 64.37 (*SD*=6.70) and ranged from 55 to 85 years of age. Of the 98 older adults sampled, 46 (46.9%) were male and 52 (53.1%) were female. As this was an initial pilot study of the WASOP, priority was given to increasing the numbers of participants, for maximum response, rather than focusing on a truly stratified sample of older adults. In this regard, only age and gender were considered during sampling, resulting in a good mix across age groups and gender.

## Results

### Test-retest

A sub-sample of approximately 20% (19 of the 98) of respondents was re-tested for their responses to the study questionnaire approximately two weeks after their initial questionnaire responses. These individuals were all recruited through the University of Birmingham's research scheme as they attended the university on at least two occasions for study participation. A test-retest sample size of approximately 20% of the total sample size is able to achieve medium-effect size. The total scores on the original test condition (*m*=247.74, *SD*=24.678) correlated significantly (*r*=0.906, *p*<0.01) with the re-test condition (*m*=246.26, *SD*=27.422). A repeated measures *t*-test revealed that there was no significant difference between the test and re-test conditions (*t*=0.553, *df*=18, *p*=ns). Hence, participants' responses to the test items did not change over time, revealing good reliability.

**Convergent validity**

To enable an analysis of the convergent validity of the study questionnaire, a random sub-group of participants ($n$ = 37) were, in addition to the study questionnaire, also given the Warwick and Edinburgh Mental Well-Being Scale (WEMWBS; Tennant et al., 2007, see Appendix F). Randomisation was achieved by attaching the WEMWBS to every third questionnaire handed out. Agreement from the authors to use the WEMWBS is presented in Appendix G. The WEMWBS is a short single-factor measure of mental well-being which incorporates 14 positively worded items. The measure has been validated on a UK population and reported good test-retest reliability ($r$ = 0.83) and internal consistency ($\alpha$ = 0.89-0.91). Participants are instructed to consider their situation over the last two-week period and indicate to what degree they agree with statements on a five-point scale. The study questionnaire ($m$=253.57, $SD$=27.55) and the WEMWBS ($m$=53.36, $SD$=8.74) were found to be highly correlated to a significant degree ($r$=0.774, $p$<0.01).

**Reliability Analysis**

To analyse item reliability, items of the study questionnaire were analysed to identify questions with low variance in responses (i.e. non-differential items), highly correlated items (i.e. redundant items) and items that were statistically unrelated to the overall well-being measure (i.e. unreliable items).

*Non-differential items*

One item (question 1 – *"I am able to care for myself"*) had extremely low variance ($\sigma^2$=0.149, *range*=1) and was therefore removed from subsequent analysis. The

remaining 60 items had variances in excess of 0.4 (mean $\sigma^2$=0.838) and ranges greater than 2 and were entered into the reliability analysis to determine internal consistency of the study questionnaire.

*Item facility*

Bivariate correlations were conducted between all individual items to investigate potential redundancies. De Vaus (1993) has suggested that items with correlation above 0.80 should be removed as they principally measure the same concept, and hence this criterion was applied. Items 42 (*"I feel financially secure")* and 55 (*"My savings are sufficient"*) were highly correlated ($r_s$=0.858, p<0.001). Following de Vaus, these two items theoretically accounted for similar aspects, indicating a potential redundancy. An investigation of the overall contribution of each of these items to the overall score indicated that item 55 (*"My savings are sufficient"*) did not contribute to overall well-being, item-total correlation 0.186, *p* = ns. This item was therefore removed from further analyses.

*Item discrimination*

The remaining 59 items were then analysed against the questionnaire score total to examine their overall contribution to well-being. This analysis identifies items which accurately discriminate between low and high responders. Again, bivariate correlations were calculated, this time between items and score total. Betz (1996) has argued that items with correlations of 0.30 or less with the overall score total are unreliable and are poor at discriminating between high and low responders and should therefore be

excluded. A criterion of 0.30 was therefore adopted in the present analysis. As a removal of an item affects the overall correlations of the remaining items, analysis was re-run following each item removal.

The item with the lowest item-total correlation (and less than 0.3) was removed and the analysis rerun until only items with item-total correlations over 0.3 remained. In total, seven items were removed due to item-total correlations of less than 0.3 (items: 9 - *"I find strength within my faith"*, 18 – *"I am able to carry out my day to day activities"*, 30 – *"I am able to pray or practice my faith if I want to"*, 42 – *"I feel financially secure"*, 49 – *"I feel I have a sense of belonging within my faith"*, 53 – *"I help other people too much"*, and 59 – *"I do not need to worry about the people I love, because they are doing ok"*).

*Internal consistency*

At this stage the overall Cronbach's alpha level, a measure of internal consistency, equalled 0.962. One item (question 2 – *"The help I give to other people is putting me at risk, physically"*) of the 52 remaining items could be deleted to improve the alpha level and was subsequently removed. This left a scale alpha of 0.963 for the 51 remaining items indicating a highly reliable scale (Broman et al., 2001, see Table 2.1 below). However, according to Cronbach (1951) a high alpha does not always equal high reliability when there are many items in the scale, as alpha increases with the number of items. Further, Cronbach's alpha is commonly interpreted as a measure of uni-dimensionality as it measures items against the total score of those items. Thus, it can be argued that the high alpha value reported here indicates one underlying factor, in this case

well-being. Nevertheless, both Grayson (2004) and Cortina (1993) have shown that multi-factor solutions can be found even within scales with high alpha values. Indeed, Cronbach (1951) suggests that internal consistency analysis is performed for individual subscales indicated by a factor solution.

Table 2.1: The 61-item questionnaire with the ten unreliable items highlighted (shaded)

| **Integrity of self** |
|---|
| 1. I am able to care for myself |
| 5. I feel that I do not have a sense of who I am |
| 8. I am angry at myself |
| 10. I feel angry with other people |
| 12. My life is of value |
| 21. I am able to access supportive relationships |
| 29. I am able to assert myself with others |
| 34. During my life I have always enjoyed supportive relationships |
| 46. I can laugh at myself |
| 47. I am able to live a respectful life |
| 48. I have experienced abuse |
| 52. I do not believe that others value me |
| 61. I am not able to care for myself |

| **Enrichment** |
|---|
| 14. I have little or no opportunity to pursue my interests due to current circumstances |
| 25. I am unable to pursue my own interests |
| 26. I am actively involved in pursuing my own interests |
| 28. I have access to interesting activities |
| 31. I am unable to get any pleasure out of my old interests due to my mental health |
| 35. I am happy with my current achievements |

| **Integrity of others** |
|---|
| 2. The help I give to other people is putting me at risk, physically |
| 7. I am unable to help the people I care for |
| 13. People around me are selfish |
| 15. I feel unhappy because I am unable to help the people I care about |
| 17. I am unable to undertake a regular routine |
| 22. I give support to the people I care for |
| 36. Other people do not want the help I offer |
| 44. I feel worried about the welfare of people I care about |
| 51. The help I give to other people is putting me at risk, mentally |
| 53. I help other people too much |
| 56. I feel content because I can help the people that I care about |
| 59. I do not need to worry about the people I love, because they are happy and contented |

| **Sense of Agency** |
|---|
| 4. Significant restrictions are imposed on me due to my illness or disability |
| 6. I feel able to do things that I want to do |
| 9. I find strength within my faith |
| 18. I am able to undertake my day to day activities |
| 20. I feel unable to engage in my life due to my mental health |
| 23. Illness or disability prevents me from taking control of my life |
| 27. I have access to community facilities |
| 38. I am able to make choices about what I do |
| 40. I feel that there are restrictions placed on how I lead my life |
| 41. I find it difficult to assert myself about life choices |
| 57. I have the opportunity to access supportive relationships |

| **Belonging** |
|---|
| 11. I have a good bond with the people I know |
| 19. I feel alone |
| 24. I need others to make me feel good about myself |
| 32. I have close relationships with family and friends |
| 45. I find it difficult to interact with others due to trust |
| 49. I feel I have a sense of belonging within my faith |
| 50. I feel part of a supportive network |
| 54. I feel excluded by others |
| 58. I feel unable to trust others |
| 60. I feel a sense of belonging within my current relationships |

| **Security** |
|---|
| 3. I am unable to stop bad things happening to me |
| 16. I feel vulnerable |
| 30. I feel able to pray or practice my faith if I want to |
| 33. I feel worried about coping with the future |
| 37. I feel safe |
| 39. I have been abandoned |
| 42. I feel financially secure |
| 43. There are people around me who can offer support, when needed |
| 55. My savings are sufficient |

**Factorial Structure**

Although this study was of an exploratory nature it also sought to investigate the theoretical subscales proposed by Papadopoulos (2009). Therefore, to further investigate the underlying structure of the questionnaire and its relation to well-being exploratory Principal Component Analyses (PCA) was performed on the 51 items remaining after reliability analyses.

Consideration was also given to the rotation of the potential factors under study. An orthogonal solution would follow the assumption that subscales or factors in well-being were independent of each other. Utilising an orthogonal rotation would in fact force independence of factors as the factorial solution will apportion the variance associated with the items in a way which maximises independence. The present study therefore opted for an oblique factorial rotation which has no assumptions of independence between factors. This expectation would be consistent with the high Cronbach's alpha values reported earlier, since these suggest that there are associations between items, and hence potential factors, as they are all good predictors of the underlying concept of well-being.

*Principal component analysis*

An oblique (*promax*, $\kappa$=4) rotation PCA was conducted on the 51 reliable items. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO=0.821) was 'great' (Hutchenson & Sofroniou, 1999), indicating that there were enough items to adequately measure the theoretical factors found. Bartlett's test for sphericity was highly significant ($\chi^2$=3758.39, $df$=1275, $p$<0.001) suggesting a strong relationship between items.

Utilising the Scree plot and eigenvalues, it was possible to identify 3 factors accounting for 49.04% of the shared variance. Following Tabachnick and Fidell (2001), who argue that the pattern matrix be utilised to determine factor loadings of an oblique rotation, this table was consulted.

Comrey and Lee (1992) have suggested that only factor loadings greater than 0.32 should be interpreted, representing a minimum 'poor' loading criteria. Nine items were not interpreted due to loadings below 0.32. Further, Kerns, Turk and Rudy (1985) have suggested that items loading onto two factors with a difference of less than 0.15 between loadings should also be excluded due to poor differentiation. Hence, this criterion was also applied resulting in the removal of 3 additional items. Application of these criteria resulted in the removal of a total of 12 items, leaving 39 remaining, interpretable items.

Comrey and Lee (1992) also suggest that loadings in excess of 0.71 are 'excellent' as they account for 50% of the variance in the correlation between the individual item and the factor. Items that met this criterion are indicated in Table 2.2 (i.e. indicated by the shaded cells) and represent items with very high loadings within this data sample. Cronbach's alpha for the 39-item WASOP was excellent (0.953).

Table 2.2: PCA factor loadings for the Well-being Assessment Schedule for Older People

| Theoretical dimensions | | Factors | | |
|---|---|---|---|---|
| | | 1 *Belonging* | 2 *Purpose* | 3 *Integrity of self* |
| ***Belonging*** | | | | |
| 11 | **I have a good bond with the people I know** | **0.847** | | |
| 19 | **I feel alone*** | **0.721** | | |
| 24 | I need others to make me feel good about myself* | 0.614 | | |
| 32 | **I have close relationships with family and friends** | **0.809** | | |
| 45 | I find it difficult to trust others* | 0.462 | | |
| 50 | I feel part of a supportive network | 0.594 | | |
| 54 | **I feel excluded by others*** | **0.842** | | |
| 58 | **I feel unable to trust others*** | **0.710** | | |
| 60 | **I feel a sense of belonging within my current relationships** | **0.746** | | |
| ***Security*** | | | | |
| 3 | I am unable to stop bad things happening to me* | 0.437 | | |
| 16 | I do not feel safe* | 0.558 | | |
| 37 | **I feel safe** | **0.739** | | |
| 39 | **I have been abandoned*** | **0.810** | | |
| 43 | There are people around me who can offer support, when needed | 0.698 | | |
| ***Integrity of self*** | | | | |
| 5 | I feel that I do not have a sense of who I am* | 0.613 | | |
| 8 | **I am angry at myself*** | **0.710** | | |
| 12 | **My life is of value** | **0.875** | | |
| 21 | I am able to access supportive relationships | 0.597 | | |
| 34 | During my life I have always enjoyed supportive relationships | 0.673 | | |
| 47 | **I am able to live a respectful life** | | | **0.727** |
| 52 | I do not believe that others value me* | 0.630 | | |
| 61 | **I am not able to care for myself*** | | | **0.840** |
| ***Integrity of others*** | | | | |
| 13 | People around me are selfish* | 0.470 | | |
| 15 | **I feel unhappy because I am unable to help the people I care about*** | | **0.728** | |
| 17 | I am unable to follow a regular routine* | | 0.449 | |
| 26 | I am unable to help the people I care for* | | 0.519 | |
| 36 | Other people do not want the help I offer* | 0.507 | | |
| 44 | **I feel worried about the welfare of people I care about*** | | **0.733** | |
| 51 | The help I give to other people is putting me at risk, mentally* | | 0.501 | |
| 56 | I feel content because I can help the people that I care about | 0.463 | | |
| ***Enrichment*** | | | | |
| 7 | **I am actively involved in pursuing interesting activities** | | **0.729** | |
| 14 | **I cannot pursue my interests due to current circumstances*** | | **0.781** | |
| 25 | I am unable to pursue my own interests* | | 0.630 | |
| 28 | **I have access to interesting activities** | | **0.748** | |
| ***Sense of Agency*** | | | | |
| 20 | My mental health difficulties stops me living as fully as I would like* | 0.532 | | |
| 23 | Illness or disability prevents me from taking control of my life* | | | 0.639 |
| 27 | I have access to community facilities | | 0.473 | |
| 40 | I feel that there are restrictions placed on how I lead my life* | | 0.706 | |
| 57 | **I am able to call on others for support, if I need to** | **0.840** | | |

* denotes negatively worded items that were reversed for analyses

**bold** and shaded items indicate 'excellent' factor loadings (Comrey & Lee, 1992)

As Table 2.2 illustrates, Factor 1 ($\lambda$=19.241) accounted for 37.73% of the variance and consisted of 25 items with factor loadings of at least 0.32; nine from the dimension concerned with belonging, five from security, six from integrity of self, three from integrity of others, and two from sense of agency. When applying Comrey and Lee's (1992) stricter criteria of 0.71 for items with excellent factor loadings, 11 items could be identified; six from the belonging dimension, two from security, two from integrity of self, and one item from sense of agency. When considering these items, it was postulated that items in Factor 1 chiefly relate to belonging, and the self as a social being. The internal consistency of the belonging factor was 0.951 for the 25-item scale, and 0.939 for the 11-item scale, both indicating a highly reliable sub-scale (Broman et al., 2001).

Factor 2 ($\lambda$=3.762), which accounted for 7.38% of the variance, consisted of 11 items when applying a criteria of minimum 0.32 factor loading; five from the dimension concerned with integrity of others, four from enrichment, and two from sense of agency. Applying Comrey and Lee's (1992) criteria of 0.71, five items with excellent loading on this factor emerged; two from integrity of others, and three from enrichment. An analysis of these items indicated this factor to be primarily concerned with purposefulness, and contributing to the welfare of loved ones. Internal consistency calculations for factor 2 revealed values of 0.885 for the 11-item scale, and 0.814 for the 5-item scale. Again, these values are both considered indicative of a reliable scale (Broman et al., 2001).

Factor 3 ($\lambda$=2.008) accounted for 3.94% of the variance. Applying the minimum loading criteria of 0.32, it consisted of three items; two from the dimension of integrity of self, and one from sense of agency. The stricter criteria of 0.71 indicated the two items

from the integrity of self dimension. An inspection of these suggested that factor 3 is concerned with being able to live an independent life, able to care for oneself. This was felt to correspond to Papadopoulos et al.'s integrity of self dimension. Internal consistency calculations for this scale revealed reliable values, 0.776 for the 3-item scale, and 0.691 for the 2-item scale.

## Discussion

This paper aimed to develop a reliable and valid measure of well-being, the WASOP, using Papadopoulos et al.'s (2009) concept of well-being as a framework. Papadopoulos et al. interviewed older adults to define aspects important for well-being in older people. His qualitative analysis led to a proposed model of well-being in older people that had six dimensions: integrity of self, integrity of others, belonging, enrichment, sense of agency, and security. The data collected by Papadopoulos et al. was utilised by the present study to develop questions reflecting the narratives presented by the sample in Papadopoulos et al.'s study. Following a protocol of selecting the more frequently expressed concepts, unambiguous and theoretically relevant items, a total of 61 items comprised the refined study questionnaire. A total of 98 participants, recruited via an opportunistic sampling procedure, completed the 61-item WASOP.

Reliability analyses of the 61-items indicated that ten items were unreliable or redundant measures of well-being and were removed from subsequent analysis. In particular, very few items were removed in the reliability analyses due to low discriminatory properties, redundancies, or poor contributory powers to overall well-being. Of the variables that were removed, several dealt with religiosity and financial

security. Whilst these have been found to impact on reported well-being in several studies (Diener & Biswas-Diener, 2004; Fry, 2000; Mackenzie, Rajagopal, Meibohm, & Lavizzo-Mourey, 2000), they were not reliable indicators of well-being in the present sample. In terms of religion, it is suggested that the lack of reliability of these items may relate to the polarising nature of religion (e.g. either you are religious or not). It is possible that religious faith only relates to well-being in people who are religious. In terms of items relating to financial security, Diener and Biswas-Diener (2004) argued that money is only important for well-being to the extent that it allows people to meet their basic needs. It is possible that the current sample were in a position where basic needs were met for all, and thus there were no strong associations between financial security and well-being. Further, Ferraro and Su (1999) found that negative effects of financial strain on well-being can be, at least in part, mitigated by supportive social relationships. Thus financial issues might have been less of a concern in the current sample, as items relating to belonging and social relationships were all strongly associated and good predictors of well-being.

The empirical exploration of underlying concepts of the 51-item WASOP measure revealed three separate factors explaining 49.04% of the shared variance. The first factor was chiefly concerned with items relating to relationships and sociability as all of the items from Papadopoulos et al.'s (2009) dimension of belonging loaded here. Although items from Papadopoulos' security and integrity of self dimensions also loaded in the first factor, it was postulated that a majority of these were also concerned with relationships (e.g. "*I have been abandoned*"). Some of the items loading in the first factor concerned feelings of safety. These were mainly items from the security dimension

identified by Papadopoulos et al. This would indicate that the notions of belonging and having social relationships to draw on for support are important for people's perceptions of safety. Indeed, the relationship between belonging and security has been established, with social isolation impacting on issues such as safety and fear of crime (Kennedy & Silverman, 1985). Consequently, the first factor was labelled *belonging*.

The second factor that emerged from the factor analysis contained items from Papadopoulos et al.'s (2009) dimensions integrity of others, enrichment, and sense of agency. A majority of these items were concerned with having the opportunity and ability to partake in meaningful and enriching activities. In addition, several of Papadopoulos et al.'s items from the integrity of others dimension concerned with the ability to contribute to the welfare of loved ones loaded on this factor. Thus, it would appear that being able to actively contribute to the welfare of loved ones is an activity that adds meaning to and enriches a person's life, thus adding to a sense of purpose (Murray & Livingstone, 1998). Hence, this factor was labelled *purposefulness*.

The third factor that emerged from the analysis contained items from Papadopoulos et al.'s (2009) integrity of self dimension and was therefore labelled as *integrity of self*. In addition, one item from the sense of agency dimension ("*Illness or disability prevents me from taking control of my life*") loaded here, however, it was felt that this item is conceptually more similar to Papadopoulos et al.'s definition of integrity of self. It was therefore concluded that this factor concerned items to do with the ability to live one's life in a respectful, autonomous, and self-sufficient manner.

Items, theoretically belonging to five of the six Papadopoulos et al.'s (2009) narrative-led dimensions, each factored onto primarily one of the three factors with the exception of *sense of agency*, which loaded indiscriminately on all three factors. Consequently, there is the possibility that this factor may be ill-defined or even non-existent, consisting primarily of, or tapping into, concepts covered by other dimensions. Indeed, an exploration of the items making up sense of agency, suggests that they may not adequately describe the overall conceptual definition of sense of agency proposed by Papadopoulos et al.

Although the themes theorised by Papadopoulos et al. (2009) have not been supported in their entirety in the present study, it is clear that the qualitative approach adopted by Papadopoulos et al. to identify aspects making up well-being in older people, produced a reliable measure of well-being. Further, as the factor analysis has revealed, there is strong support for some of the underlying dimensions to explain the over-arching concept of well-being. Whilst the present study was only successful in identifying three underlying dimensions, they conceptually conform to the definitions proposed by Papadopoulos et al.

Importantly, the three dimensions found in the current study are conceptually similar to other existing literature in well-being. For example, the 'belonging' dimension identified in the current study is conceptually similar to Ryff's (1989) 'positive relations to others' scale. It is further felt that the second dimension identified here, purposefulness, taps into both Neugarten et al.'s (1961) 'zest', as well as Ryff's 'purpose in life' dimension. Finally, the third dimension identified in this study, integrity of self, can be conceptually linked to Neugarten et al.'s 'resolution and fortitude' and Ryff's

'autonomy', 'environmental mastery', and 'self-acceptance' dimensions. A critical review of some methodological limitations of the present study will now be considered.

**Limitations of the current study**

The results of this pilot study into the development and properties of a narrative-led questionnaire of well-being have been promising. Nonetheless, the results must be considered in light of methodological limitations that were beyond the control and time-constraints of the researcher. The most prominent limitation was sample size. Although the study was received well and surveyed approximately 100 older adults, Kass and Tinsley (1979) recommend that factor analysis, in particular, only be used when there are at least 300 cases. In fact, Comrey and Lee (1992) have classified a sample size of 100 cases for factorial analysis purposes as 'poor'. It is acknowledged that a reduction in the number of items (e.g. questions) could have, in part, addressed the problem of sample size. However, this was not deemed appropriate due to the exploratory nature of the study. As such, it was felt that breadth of questions was necessary to explore reliability and validity of a large number of dimensions. Further validation studies of the WASOP should therefore aim to recruit larger samples. Indeed, Comrey and Lee (1992) suggest a sample size of 300 for the number of items in the WASOP.

As discussed, the present questionnaire items were developed using the verbatim narratives taken from Papadopoulos et al.'s (2009) qualitative studies. As such, extracts from the narratives were converted into statements, relating as closely as possible to the sentiment and wording of that narrative. However, there are possible methodological problems with this approach. Firstly, the expression of specific concepts might be

idiosyncratic and therefore not readily grasped by others. This was picked up on by the focus group, who expressed differing interpretations of particularly one item, namely "*I am able to live a respectful life*". The six participants in the focus group presented two differing interpretations of the meaning of this item: the ability to live in accordance with one's moral and ethical beliefs, and living in a way that invites recognition and respect from others. The subsequent discussion around this item concluded that both meanings tapped the intended concept of integrity of self and it was therefore decided to keep the item the way it was. However, the idiomatic phrasing may have meant that this was not an expression that makes immediate sense to respondents. It is possible therefore that alternative interpretation of items will have influenced responses, and that these might not therefore always have tapped the intended underlying concept.

Secondly, whilst the utilisation of narratives legitimately informed the development of the theoretical understanding of the way older people define well-being, using the narratives of Papadopoulos et al.'s (2009) 39 participants to develop items for this questionnaire may have been too constraining. It may be that this method of drawing up items resulted in limitations in content due to the fact that narratives are likely to be directly influenced by the specific demographics, characteristics, and experiences of the sample. Hence, by only including items from the narratives, significant expressions of well-being, not directly reported by Papadopoulos et al.'s sample, might have been missed. This limitation could have partially been minimised by adopting a concept-driven rather than a narrative-driven approach when developing items, using the definitions proposed by Papadopoulos et al.

Thirdly, the adoption of a concept-driven approach, as opposed to a narrative-led approach may have enabled a questionnaire to be constructed with clearer conceptual differences between items. In other words, the narrative-led approach in essence forced the distribution of statements into a rigid dimensionality with some items fitting the conceptual idea of that dimension better than others, while some may have fitted into any number of dimensions. For example, Papadopoulos et al. argue that the phrase "*There are people around me who can offer support, when needed*" contributed to the security dimension and this wording was therefore used as an item in the questionnaire with an expected loading on the security sub-scale. However, the item could conceptually also be understood as one having a sense of belonging and access to a supportive network. In fact, this item loaded on the belonging factor in the present study, highlighting the need of further defining its conceptual meaning.

Finally, the study adopted an opportunistic sampling methodology when recruiting participants. The only demographics requested were age and gender. Hence, the representativeness of the participants in the present study to that of older people in general, and indeed to Papadopoulos' et al.'s (2009) original sample, cannot be assumed. Hence, any conclusions reported here must be considered with caution and only as an initial exploration of the structure of well-being in people over the age of 55. Indeed, several studies have reported differences in reported well-being in older people depending on differing demographics, including marital status (Coombs, 1991), financial security (Diener & Biswas-Diener, 2004) and physical (Larson, 1978) and mental health (de Beurs, Beekman, van Balkom, Deeg, van Dyck, & van Tilburg, 1999). Further

validation studies should therefore aim to have a more comprehensive demographic spread to increase the generalisability of the results.

In conclusion, the narrative-driven approach used by Papadopoulos et al. (2009) resulted in a reliable measure of well-being. Whilst the six dimensional model proposed by Papadopoulos et al. was not replicated in the current study, five of these six dimensions were conceptually tapped by the three sub-scales revealed by analyses in this study. The present study lends further support to the significance of, in particular, belonging for well-being in older people. Bearing in mind the limitations of the present study, the WASOP has been shown to be a reliable indicator of well-being in older adults and may make a significant contribution to clinical assessment.

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# Paper 3: Execute summary – Public domain paper

# Measuring well-being in older adults

## Background

With a greater proportion of people reaching old age, the study of what constitutes successful ageing has received significant attention (Baltes & Baltes, 1990). The increased attention has led to a shift in the way well-being has been regarded, from it being primarily concerned with the absence of ill-being, unhappiness or dysfunction (Bookwala, Harralson, & Parmelle, 2003), to it focusing more on positive aspects of well-being (Seligman, Steen, Park, & Peterson, 2005). The measurement of well-being has been particularly important as it has guided clinical application and offered important information for service provision. Whilst most researchers agree that well-being involves some combination of pleasure attainment and global satisfaction, opinions on how to measure these have varied. Recent studies have argued for the importance of using older people's views of what constitutes well-being when designing measures (Gabriel & Bowling, 2004). This study therefore utilised a model proposed by Papadopoulos, Biggs, and Tinker (2009), which was developed using older people's narratives of well-being. It argues that well-being can be understood by six dimensions: integrity of self, integrity of others, enrichment, sense of agency, belonging, and security. These dimensions, together with the narratives, were used to develop the Well-being Assessment Schedule for Older People (WASOP) containing 61 items. This study was particularly interested in investigating whether the WASOP is a reliable and valid measure of well-being in older people.

## Method

Ninety-eight participants, above the age of 55, completed the WASOP. Participants were mainly recruited through the University of Birmingham, a small Anglican Church group,

and a retirement village. Forty-seven percent of the respondents were male and 53 percent women. Their age ranged from 55 to 85, with a mean age of 64.

## Results

Reliability analyses of the WASOP revealed that it captures a varied range of aspects of well-being, and that it offers a stable and valid measurement of well-being. Factor analysis identified three latent factors or sub-scales. These represented *belonging* (having meaningful and important relationships), *purposefulness* (having a sense of purpose, either through enriching activities or caring for important others), and *integrity of self* (the extent to which one is able to live one's life in accordance with important values).

## Conclusion

Whilst questionnaire items in the current study did not reveal the six dimensional model proposed by Papadopoulos et al. (2009), five of these dimensions were covered by the three sub-scales revealed by factor analysis in this study. As this was the first attempt to validate Papadopoulos et al.'s model of well-being, the convergence of the qualitative theorisations into a reliable and valid empirical scale is encouraging. Nevertheless, it was surmised that the underlying expressions of well-being may depend on specific demographics of the study sample so interpretation of the results should be made cautiously. Further, as the current sample was relatively small (e.g. Kass & Tinsley, 1979, propose a minimum of 300 participants), it is suggested that the WASOP continues to be piloted on further samples. In conclusion, the WASOP, and in particular the

utilisation of people's narratives for constructing measures of well-being, resulted in a reliable measure, making a significant contribution to the way well-being is understood.

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**Appendix A: Papadopoulos & Halloran (2008; unpublished) 101-item questionnaire**

**[not available in the digital version of this thesis]**

**Appendix B: The Well-being Assessment Schedule for Older People (WASOP)**
**[not available in the digital version of this thesis]**

**Appendix C: Ethical approval from the University of Birmingham**
**[not available in the digital version of this thesis]**

## Appendix D: Focus group feedback

Main items of comment/concern

Item 47 – "I am able to live a respectful life"

Unclear meaning - respect from others
- in accordance with my values

Both related to definition of integrity of self, therefore keep as is.

Items relating to faith – what if a person has no faith or religious beliefs.

Discussion concluded that option is to disagree with these items- keep as is.

Item 17 – change wording from follow to undertake "I am unable to undertake a regular routine" to better reflect item 18

Item 13 - Change of wording to make clearer "People around me are selfish"

Item 19 – remove "or rejected" as it is redundant. "I feel alone"

## Appendix E: Cover letter (Participant Information Sheet) for WASOP

UNIVERSITY OF BIRMINGHAM

*Dear Sir or Madam,*

You are invited to participate in a research project, undertaken by the University of Birmingham. The project aims to develop a questionnaire measuring well-being in people 55 years and over. Recent research has found that well-being is made up of several different themes. It is hoped that by developing a questionnaire which measures these themes, psychologists and other health professionals can gain a better understanding of well-being in older people.

**What will I have to do if I decide to take part?**

You will need to complete this questionnaire, which should take approximately 20 minutes. Your participation is voluntary. If you do not wish to participate, simply discard the questionnaire. Once completed, please return the questionnaire in the attached envelope.

**Will my responses be kept confidential?**

Responses will be completely anonymous; your name will not appear anywhere on the survey and your answers will be used only as part of a general analysis.

**Will I experience any problems or difficulties if I take part?**

In the unlikely event that you feel distressed by any issues raised in this questionnaire, please contact your GP or the Samaritans on 08457 90 90 90. The Samaritans are a charitable organisation offering free and confidential support and advice.

*Thank you very much for your time and assistance.*

Helena Backmark, B.Sc., M.Sc.
Clinical Psychologist in Training

Project supervised by:
Jan Oyebode, PhD
Director, Clinical Psychology Doctorate
University of Birmingham

University of Birmingham Edgbaston Birmingham B15 2TT United Kingdom
[Telephone, email]

## Appendix F: The Warwick Edinburgh Mental Well-Being Scale (WEMWBS)

# The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

**Below are some statements about feelings and thoughts.**

**Please tick the box that best describes your experience of each over the last 2 weeks**

| STATEMENTS | None of the time | Rarely | Some of the time | Often | All of the time |
|---|---|---|---|---|---|
| I've been feeling optimistic about the future | 1 | 2 | 3 | 4 | 5 |
| I've been feeling useful | 1 | 2 | 3 | 4 | 5 |
| I've been feeling relaxed | 1 | 2 | 3 | 4 | 5 |
| I've been feeling interested in other people | 1 | 2 | 3 | 4 | 5 |
| I've had energy to spare | 1 | 2 | 3 | 4 | 5 |
| I've been dealing with problems well | 1 | 2 | 3 | 4 | 5 |
| I've been thinking clearly | 1 | 2 | 3 | 4 | 5 |
| I've been feeling good about myself | 1 | 2 | 3 | 4 | 5 |
| I've been feeling close to other people | 1 | 2 | 3 | 4 | 5 |
| I've been feeling confident | 1 | 2 | 3 | 4 | 5 |
| I've been able to make up my own mind about things | 1 | 2 | 3 | 4 | 5 |
| I've been feeling loved | 1 | 2 | 3 | 4 | 5 |
| I've been interested in new things | 1 | 2 | 3 | 4 | 5 |
| I've been feeling cheerful | 1 | 2 | 3 | 4 | 5 |

Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)

## Appendix G: Agreement to use WEMWBS

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**RE: permission to use WEMWBS**
[email]

Dear Helena,

You are welcome to use the scale. We do ask that you feed back your results to us as this will help with the long term validation of the scale.

Information on how to use the scale including scoring is included in the WEMWBS user-guide, which you will find in the link below.

http://www.healthscotland.com/documents/2702.aspx

Please let me know if you have further questions.

Many thanks,
[Name]

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**From:** Helena Backmark [mailto:[email]]
**Sent:** Tue 10/02/2009 12:31
**To:** [name]
**Subject:** permission to use WEMWBS

Dear [name],

I am requesting permission to use the WEMWBS as part of a Doctoral research project looking to develop a multi-variate measures of well-being in older adults. I am hoping to use the WEMWBS as convergent validity measure for the validation of the scale we are developing. I would be more than happy to present to you any research findings.

Yours Sincerely,

Helena Backmark
Trainee Clinical Psychologist
School of Psychology
University of Birmingham
Edgbaston
B15 2TT

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**Appendix H: Instructions for contributors: Ageing & Society**
**[not available in the digital version of this thesis]**