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**Perceived control's influence on wellbeing in residential care vs. community dwelling
older adults**

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Abstract

As people age and their control capacity presumably declines, it is argued that the influence of acceptance (or secondary perceived control) increases to help maintain normative levels of wellbeing. While previous studies have typically investigated the relationship between perceived control and global estimates of life satisfaction in community samples, the present study compared the link between perceived control and eight key domains of satisfaction in 101 older adults (65+ years) living in the community and 101 older adults (65+ years) living in residential aged-care. The findings supported the theory that stability in satisfaction and primary perceived control may, in part, be facilitated by a growing acceptance of what cannot be changed. Despite assumptions that old age is associated with lower primary control, particularly when living in an aged-care facility, the data did not indicate that primary perceived control was suppressed as a result of living in residential age-care. The results did indicate, however, that primary and secondary perceived control may predict satisfaction with comparable strength under low-control conditions, and that acceptance takes more of a prime position in low control situations in later life.

Keywords: Subjective wellbeing, Quality of life; Perceived control; Older adults; residential aged-care.

Introduction

Sustaining a sense of control into the later years has been proposed as a psychological factor associated with continued high functioning in older adults, and has been identified as a strong predictor of successful aging (Andrews, Clark, & Luszcz, 2002; Ranzijn & Luszcz, 1999). Perceived control consists of two components: primary and secondary control. Primary control relates to the capacity to make changes to the environment to suit one's desires or needs. In contrast, secondary control describes making cognitive changes within the self to adapt to the environment— for example, lowering expectations or reinterpreting unfortunate events as fate (Morling & Evered, 2006; Thompson, Collins, Newcomb, & Hunt, 1996).

It is widely accepted that primary control has greater functional value than secondary control due to an increased likelihood that individuals' needs will be met through their own actions (Heckhausen & Schulz, 1995; Rothbaum, Weisz, & Snyder, 1982; Thompson et al., 1998). Although the importance of primary control is largely undisputed, explanations are less clear regarding the role of secondary perceived control in circumstances when primary control capacity is reduced. Under low-control conditions, Heckhausen and Schulz's (1995) lifespan theory of control suggested that secondary perceived control buffers losses in primary perceived control by enabling acceptance of what cannot be changed. This acceptance allows individuals to hone the selection of goals such that primary control is redirected in realistic ways, thus maintaining primary perceived control at stable levels.

The manifestation of perceived control under low-control conditions is commonly explored in older people (*cf.* de Quadros-Wander, McGillivray & Broadbent, 2013), on the basis that many have decreased abilities or opportunities to exercise primary control. In addition to natural physical and cognitive deterioration in later life, sociocultural challenges

to primary perceived control in older adults include a shortened sense of time in the future to make changes and a narrowing of resources and direction at the expense of other options (Heckhausen & Schulz, 1995; Wrosch & Heckhausen, 2002). There are also losses of age-specific opportunities (e.g., childbearing before menopause) and a diminished social network as peers and partners pass away. These conditions may be a threat to older adults' sense of control, as may well place their subjective wellbeing at risk.

While decreased satisfaction or perceived control may not be inevitable consequences of aging, some older people are likely to be at a higher risk than others of experiencing such losses. In particular, aged-care residents might experience lower primary control potential than community-dwellers, both as a result of living in a structured environment, and due to the prerequisite of having some degree of functional impairment for entry into residential care. Further, unusually high rates of depression have been detected within residential aged-care populations, relative to their counterparts in the community (Baker & Miller, 1991; Teresi, Abrams, Holmes, Ramirez, & Eimicke, 2001), indicating a possible discrepancy in the aging experience between the two.

Few empirical studies have been undertaken to compare residents of aged-care facilities with community-based samples of older people with respect to perceived control. In line with the aging population there is likely to be an increase in the proportion of older individuals requiring support, and a more thorough understanding of what constitutes optimal aging is thus called for. Given the likely differences in perceived control mentioned above, it is important to examine whether aged-care residents differ from community-dwellers in control beliefs and subjective wellbeing (SWB). The aims of this study are therefore to: (1) evaluate any differences in the levels of life satisfaction and perceived control of older people living in residential care and those living in the community; (2) to compare the overall predictive value of primary and secondary perceived control to satisfaction in aged-care residents and

community-dwellers; and (3) to examine whether group differences exist in the proportion of unique variance between primary perceived control and satisfaction, and secondary perceived control and satisfaction. The hypotheses are premised on the lifespan theory (Heckhausen & Schulz, 1995), and promote the idea that secondary perceived control has a restorative (rather than compensatory) relationship with primary perceived control.

The present study

The life span theory clearly suggests that secondary control becomes a more relevant prediction of wellbeing outcomes under conditions of low control. The present study tests this prediction by comparing the wellbeing and perceived control of residential care and community based older adults in the following ways. Univariate tests will be undertaken to determine whether differences exist between the groups on each of these study variables when considered independently. Consistent with the lifespan theory it is predicted that aged-care residents will provide lower ratings of satisfaction and primary perceived control and report higher ratings of secondary perceived control in comparison to older adults in the community.

Additional analyses will be conducted to see if differences exist when probing the relationship between perceived control and subjective wellbeing. It is anticipated that the correlation between primary control and subjective wellbeing will be stronger than the secondary control and subjective wellbeing relationship, regardless of group status. However, it is hypothesised that, in a multivariate context, the contribution of secondary control for subjective wellbeing will be stronger among residential care participants their community-living counterparts as they are perceived to be in lower control situations.

Method

Participants

Participants in this study comprised two groups of older adults (65 years and older): aged-care residents and community-dwellers. The aged-care sample was drawn from 14 low-care facilities across Victoria, Australia, and comprised 101 cognitively capable residents, 70 females ($M=85.2$ years, $SD=6.8$) and 31 males ($M=83.4$ years, $SD=9.2$) with an overall mean age of 84.6 years ($SD=7.6$).

The comparison group was drawn from a larger community pool. Participants living in the community comprised of 101 individuals, which included 70 females ($M=78.2$ years, $SD=3.8$) and 31 males ($M=80.8$ years, $SD=6.9$) with a mean age of 79.0 years ($SD=5.1$). Subjects from this pool were randomly selected by the lowest case number matching gender and age to the residential aged-care sample. Where ages could not be exactly matched, cases were selected on the basis of the closest age available. Although the gender split was comparable ($\chi^2_{(1)} = 0.0, p > .05$), the community sample was, on average, around five years younger than the residential sample. This difference was significant, $t_{(174.06)} = -6.16, p < .001$.

The two groups differed on both marital status $\chi^2_{(3)} = 13.54, p < .01$. Compared to the residential aged-care sample, the community sample higher proportion of people who were married (or de facto) and were less likely to be a widower (see Table 1). This is representative of the Australian population that also displays higher rates of widowhood in residential aged-care (AIHW, 2011; ABS, 2011)

Insert Table 1 Here

Materials

Demographic information. All participants reported their age, gender and marital status.

Mini Mental State Exam. The Mini Mental State Exam (*MMSE*: Folstein, Folstein, & McHugh, 1975) is a screening test commonly used by staff and researchers in aged-care residences to assess mental capacity of patients. The *MMSE* evaluates a variety of aspects of cognitive functions including orientation, recall, comprehension, attention and calculation, and takes around 10 minutes to administer. Consistent with prior research (e.g., Mehlsen et al., 2005), a clinical cut-off of 24 points or below was used to denote a risk of low cognitive capacity to consent.

Personal Wellbeing Index (PWI; International Wellbeing Group, 2006). Participants were asked to rate their satisfaction with life as a whole, and with eight life domains: standard of living, health, achieving in life, personal relationships, safety, community connectedness, future security, and spirituality or religion (if applicable). Ratings were made on an 11-point scale anchored at 0 (*Completely Dissatisfied*), 5 (*Neutral*) and 10 (*Completely Satisfied*). The *PWI* has been validated 28 times within Australian adult populations aged 18 years and over (http://www.deakin.edu.au/research/acqol/index_wellbeing/index.htm). Cronbach's alpha lies between 0.70 and 0.85, and the domains of the scale can be averaged to form a single factor that predicts over 50% of the variance in life satisfaction.

Primary perceived control. Participants were asked to rate how much control they felt they had over their life as a whole, and over the eight *PWI* life domains. Primary control ratings were made on an 11-point scale anchored at 0 (*No Control At All*) and 10 (*Complete Control*). This scale was constructed to parallel the *PWI* and is consistent with other research measuring control on a ten-point scale with similar anchors (McQuillen, Licht, & Licht,

2003; Ruthig, Chipperfield, Perry, Newall & Smith, 2007; Windsor, Anstey, & Walker, 2008).

Secondary perceived control. Participants were asked to rate how much they accepted the things they could not change within their life as a whole, and over the eight PWI life domains. Acceptance (or secondary control) was rated on an 11-point scale anchored at 0 (*Do Not Accept At All*) and 10 (*Accept Completely*). This scale was constructed like the primary perceived control scale to provide a direct comparison with the PWI items. Secondary control strategies have been measured in other studies on a 10-point scale anchored with similar extremes (McQuillen et al., 2003).

Procedure

Ethics was obtained from the relevant ethics board prior to conducting this research. In regards to the community sample, a total of 3200 questionnaires were posted to participants across Australia in 2006. Pre-paid envelopes were provided in which participants could return their completed questionnaires. A total of 1317 valid replies were received. Of that larger sample, 101 participants were selected and matched on age and gender to the residential aged-care sample.

For the residential aged-care sample, residents were given a presentation and written information about the research prior to data collection. Of those who consented, the researcher approached residents either in their rooms or in other areas of the facility. Following administration of the MMSE, participants were verbally administered the same items as the community sample, in the same order: PWI, primary perceived control, and secondary perceived control.

Results

Preliminary analyses

Prior to the main analysis, data were checked for missing values, outliers, and departures from normality. As the spirituality variables were the only ones to have more than 5% missing data, and this missingness was not systematically related to any other variables in the dataset, pairwise deletion was deemed likely to produce unbiased parameter estimates (Graham, 2012). There were no outliers, and most variables were normally distributed. Two variables that had significant negative skew were unable to be sufficiently normalised through transformation, and thus, original variables were used in the analyses.

Comparisons of residential aged-care and community sample ratings

Table 2 illustrates the mean ratings for satisfaction, primary perceived control and secondary perceived control for residential aged-care and community groups of older adults.

Insert Table 2 Here

Independent samples *t*-tests revealed only two significant differences on the measure of satisfaction, with the residential aged-care sample reporting significantly higher satisfaction with safety ($t_{198}=3.12, p<.01$) and spirituality ($t_{136}=3.48, p<.01$) than community-dwellers. Therefore, the prediction that aged-care residents would have lower levels of satisfaction was not supported. The data, in fact, revealed that these aged-care residents demonstrated similar, if not higher, levels of satisfaction than community-dwellers across most indices.

On the measure of primary control, independent t-tests revealed that for life in general ($t_{174}=-3.11, p<.01$) and the domains of standard of living ($t_{175}=-2.48, p<.05$), health ($t_{176}=-2.00, p<.05$), and future security ($t_{173}=-2.45, p<.05$), aged-care residents experienced lower primary perceived control than older adults in the community. While significant effects were not observed for every domain, most mean differences were in the hypothesised directions with aged-care residents demonstrating either similar or lower levels of primary perceived control than community-dwellers.

Lastly, independent t-tests revealed that aged-care residents gave higher ratings of secondary perceived control than older adults in the general community only in the domains of safety ($t_{188}=3.58, p<.001$) and spirituality ($t_{117}=2.62, p<.05$) – the same domains where aged-care residents claimed higher satisfaction than community-dwellers. Therefore, the hypothesis that individuals in residential aged-care would have higher levels of secondary control was largely unsupported.

Primary and secondary perceived control as a predictor of satisfaction

It was predicted that there would be an equivalent correlation between primary perceived control and satisfaction the two groups. Fisher's Z scores revealed few significant differences. The only domains in which expectations were not met were in the domains of relationships ($z=2.93, p<.01$), safety ($z=1.65, p<.05$), and spirituality ($z=2.14, p<.05$), with the community sample having a larger correlation between primary control and satisfaction. Satisfaction and primary perceived control were, for the most part, associated to a similar extent regardless of the residential status of each sample. The hypothesis was therefore generally supported (see Table 3).

It was hypothesised that secondary perceived control would be stronger predictor of satisfaction for aged-care residents than older adults living in the community. Once again,

Fisher's Z revealed significant differences for the domains of standard of living ($z=-2.95, p<.01$) and achieving in life ($z=-2.49, p<.01$), with the residential aged-care sample having a larger correlation between on secondary control and satisfaction than the community-based sample. Correlations in the other domains did not reliably differ across the groups (see Table 3).

Insert Table 3 Here

Optimal adaptation of perceived control

Multiple regression analyses were conducted to determine whether the relative contributions of primary and secondary control for subjective wellbeing differed across groups. It was hypothesised that the unique variance shared by primary perceived control and satisfaction would be greater for both groups than the unique variance shared by secondary perceived control and satisfaction. Fisher's z -test revealed, there were generally no significant differences. In the community sample, primary perceived control retained primacy over secondary perceived control in half of the sampled domains: health ($z=2.97, p<.01$), achieving in life ($z=2.87, p<.01$), safety ($z=2.11, p<.05$) and future security ($z=2.38, p<.01$). Thus, primary and secondary perceived control had comparable unique relationships with satisfaction (see Table 4).

It was also hypothesised that a higher proportion of variance in satisfaction would be shared between primary and secondary perceived control for the residential aged-care sample compared with the community sample. However, the application of Fisher's z -test revealed no significant group differences; hence, these values are not reported in Table 4.

Discussion

Lifespan theory (Schulz & Heckhausen, 1996) predicts that an adaptive profile for aging adults involves a shift towards using secondary control techniques when opportunities to exercise primary control are diminished. The activation of secondary perceived control should enable acceptance for those aspects of the situation that cannot be changed, and primary control should remain stable through refocusing on areas still under control. We tested this theory by comparing residential age-care and community living samples of older adults. Results provide some support for this theory, but suggest effects are more pronounced when tested in a multivariate context than with univariate statistics.

Comparisons of residential aged-care and community sample ratings

At the univariate level for these older adults, higher ratings of primary perceived control did not necessarily correspond to higher ratings of satisfaction as predicted (*cf.* Lang & Heckhausen, 2001; Remondet & Hansson, 1991). Primary control scores were generally higher for the community sample than the residential aged-care sample, although few of the differences were statistically significant (life in general, standard of living, health and future security). Further, these trends were not reflected in the life satisfaction data. Instead, higher levels of satisfaction in the residential aged-care sample were associated with higher secondary perceived control ratings in the same two domains of safety and spirituality. These results are notable because primary perceived control has been widely found to have a strong correlation with satisfaction (Lang & Heckhausen, 2001; Remondet & Hansson, 1991). Accordingly, one might have expected that the community sample would demonstrate significantly higher satisfaction within the four domains where higher primary perceived control was reported. Thus, at the individual variable level at least, there is little evidence of compensatory secondary control to make up for reduced primary control.

Predicting satisfaction from perceived control

According to lifespan theory of control, regardless of any differences in satisfaction ratings, primary perceived control was expected to remain a better predictor of satisfaction than secondary perceived control for both groups (Heckhausen, Wrosch, & Schulz, 2010). Although correlations between primary perceived control and satisfaction were higher for the community sample in all domains, this difference was mostly non-significant. Ratings of primary perceived control and satisfaction were significantly correlated for the community sample in the domains of relationships, safety, and spirituality. These results generally support the hypothesis that primary perceived control is a reliable predictor of satisfaction, regardless of potential group differences in control capacity.

Group differences were more apparent when looking at the relationship between perceived control and satisfaction. For the community group, the bivariate correlation between primary control and subjective wellbeing was stronger than secondary control and subjective wellbeing. In contrast, for the residential age-care group, the difference in magnitude of primary control-wellbeing and secondary control-wellbeing relationships was typically smaller than for the community group, and in several instances, the secondary control-wellbeing relationship was actually stronger than the primary control-wellbeing relationship. These results suggest that, for the most part, ratings of acceptance and satisfaction were comparably associated for residential aged-care and community-dwellers.

Optimal adaptation for older adults

Consistent with the lifespan theory of control (Heckhausen & Schulz, 1995), this study predicted that the unique variance shared by primary perceived control and satisfaction would

be greater than the unique variance shared by secondary perceived control and satisfaction. These data indicated that for aged-care residents in this study, primary perceived control was not a significantly better predictor of satisfaction than secondary perceived control. That means that in relation to feeling satisfied in particular domains of life, residents' ability to accept what could not be changed was as important as the feeling of being able to exert control. These findings are not consistent with the lifespan theory of control, in which optimal adaptation involves the maintenance of primary perceived control as the key contributor to wellbeing (Lang & Heckhausen, 2001; Remondet & Hansson, 1991), and instead suggests that secondary control takes more of a prime position in low control situations in later life.

For the community-based sample, the hypothesis was supported in half of the domains. This suggests that for this group, in order to feel satisfied with health, achieving in life, safety and community connectedness, it was more important to feel a sense of control over these domains than to accept what could not be changed. Given the residential aged-care group has less control capacity (due to increased cognitive and physical difficulties and restrictions imposed by their living environment), these results indicate that as primary control declines, so does its unique importance to satisfaction. The lifespan theory does not account for this shift in the importance of the unique relationship between primary perceived control and satisfaction, and it is also unclear whether further declines in control capacity lead to the eventual succession of secondary control over primary perceived control.

Collectively, findings suggest that in order to protect the wellbeing of older individuals, optimal adaptation involves both a sense of control and the active acceptance of what cannot be changed. In support of this idea, the data revealed that the unique relationship between primary perceived control and satisfaction was always larger for the community sample than the residential aged-care sample, and the unique contribution of secondary perceived control

to satisfaction was always larger for the residential aged-care sample than the community sample, except in the spirituality domain. Having a strong sense of control is therefore likely to be more uniquely important to older adults living in the community than those living in residential aged-care, while acceptance is likely to be more uniquely important to the wellbeing of aged-care residents than community-dwellers. Notably, in low control conditions, this study provided information on which domains had the most sustained or intense effect on a person (Diener, Lucas, Oishi, & Suh, 2002; Tomy, Fuller-Tyszkiewicz, & Cummins, 2012), and in which domains secondary control may be most important for maintaining satisfaction.

Limitations and conclusion

A small sample size, as found in the present study, has the potential to undermine the power and generalizability of results. However, the present results were in the expected direction, even though some were non-significant, and the background demographics confirm that the samples are broadly representative of older adults from community and residential aged-care settings (AIHW, 2011; ABS, 2011). Moreover, although sample size undoubtedly affected power in the present study, many of the non-significant results were of such a small magnitude that, even with sufficiently large sample size, they would not be deemed practically useful. The biggest effects were found within multivariate contexts (with both forms of perceived control simultaneously predicting wellbeing) rather than in bivariate associations between the perceived control variables and wellbeing. Future research is needed to confirm these findings and to establish whether these results are able to be generalized..

The academic dialogue regarding perceived control has not adequately captured the relationship between primary and secondary perceived control. The lifespan theory of control suggests that as people become older, reliance on secondary control increases, in part to

enable acceptance of what cannot be changed as a result of losing control capacity, but mainly to refocus primary control towards realistic goals. The observation of comparable levels of primary perceived control for older adults in residential aged-care and those living in the community provides strong support that primary perceived control exists quite independently of control capacity. Research into perceived control has historically neglected secondary perceived control compared with primary perceived control. The results from these analyses suggest that acceptance takes more of a prime position in low control situations in later life.

References

- AIWH (2011) Residential aged care: series number 35. Canberra: AIWH.
- ABS (2011) Census population and housing (self built table). Retrieved 12 March, 2013 from https://www.censusdata.abs.gov.au/webapi/jsf/tableView/customiseTable.xhtml?pageForm: idcl=pageForm:clearButton&pageForm_SUBMIT=1&javax.faces.ViewState=YihgyokZ5xdilqURxeVB3oDL0nvXp15Yy59TNW0zJegfLHIKTNhjxwg06FP1cdp6Rr%2FRQV%2BGDT3YsU6t28Hqy4hfXBLa6Z4SIZWnHCUJCrXaSvx59IkqrPFI CU0byA5
- Andrews, G., Clark, M., & Luszcz, M. (2002). Successful aging in the Australian longitudinal study of aging: Applying the Macarthur model cross-nationally. *Journal of Social Issues, 58*, 749-765.
- Baker, F. M., & Miller, C. L. (1991). Screening a skilled nursing home population for depression. *Journal of Geriatric Psychiatry and Neurology, 4*, 218-221.
- de Quadros-Wander, S., McGillivray, J., & Broadbent, J. (2013, online first). The influence of perceived control on subjective wellbeing in later life. *Social Indicators Research*.
- Diener, E., Lucas, R. E., Oishi, S., & Suh, E. M. (2002). Looking up and looking down: Weighting good and bad information in life satisfaction judgments. *Personality and Social Psychology Bulletin, 28*(4), 437-445.
- Folstein, M., Folstein, S., & McHugh, P. (1975). Mini-mental state: a practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research, 12*, 189-198.
- Graham, J.W. (2012). *Missing Data: Analysis and Design*. New York: Springer.

- Heckhausen, J., & Schulz, R. (1995). A life-span theory of control. *Psychological Review*, *102*, 284-304.
- Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A motivational theory of lifespan development. *Psychological Review*, *117*(1), 32–60.
- International Wellbeing Group. (2006). *Personal wellbeing index: 4th edition*. Melbourne: Australian Centre on Quality of Life, Deakin University.
- Lang, F. R., & Heckhausen, J. (2001). Perceived control over development and subjective well-being: Differential benefits across adulthood. *Journal of Personality and Social Psychology*, *81*(3), 509-523.
- McQuillen, A. D., Licht, M. H., & Licht, B. G. (2003). Contributions of disease severity and perceptions of primary and secondary control to the prediction of psychosocial adjustment to Parkinson's disease. *Health Psychology*, *22*(5), 504-512.
- Mehlsen, M., Kirkegaard Thomsen, D., Viidik, A., Olesen, F., & Zachariae. (2005). Cognitive processes involved in the evaluation of life satisfaction: Implications for well-being. *Aging and Mental Health*, *9*(3), 281-290.
- Morling, B., & Evered, S. (2006). Secondary control reviewed and defined. *Psychological Bulletin*, *132*(2), 269-296.
- Ranzijn, R., & Luszcz, M. (1999). Acceptance: A key to wellbeing in older adults? *Australian Psychologist*, *34*, 94-98.
- Remondet, J. H., & Hansson, R. O. (1991). Job-related threats to control among older employees. *Journal of Social Issues*, *47*, 91-109.
- Rothbaum, F. M., Weisz, J. R., & Snyder, S. S. (1982). Changing the world and changing the self: A two-process model of perceived control. *Journal of Personality and Social Psychology*, *42*, 5-37.

- Ruthig, J. C., Chipperfield, J. G., Perry, R. P., Newall, N. E., & Swift, A. (2007). Comparative risk and perceived control: Implications for psychological and physical well-being among older adults. *The Journal of Social Psychology, 147*(4), 345-369.
- Schulz, R., & Heckhausen, J. (1996). A life span model of successful aging. *American Psychologist, 51*, 702-714.
- Teresi, J., Abrams, R., Holmes, D., Ramirez, M., & Eimicke, J. (2001). Prevalence of depression and depression recognition in nursing homes. *Social Psychiatry and Psychiatric Epidemiology, 36*, 613-620.
- Thompson, S. C., Collins, M. A., Newcomb, M. D., & Hunt, W. (1996). On fighting versus accepting stressful circumstances: Primary and secondary control among hiv-positive men in prison. *Journal of Personality and Social Psychology, 70*, 1307-1317.
- Tomyn, A. J., Fuller Tyszkiewicz, M. & Cummins, R. A. (2013). The personal wellbeing index: Psychometric equivalence for adults and school children. *Social Indicators Research, 110*(3), 913-924.
- Windsor, T. D., Anstey, K. J., & Walker, J. G. (2008). Ability perceptions, perceived control, and risk avoidance among male and female older drivers. *Journal of Gerontology: Psychological Sciences, 63b*(2), 75-83.
- Wrosch, C., & Heckhausen, J. (2002). Perceived control of life regrets: Good for young and bad for old adults. *Psychology and Aging, 17*, 340-350.

Table 1

Demographic details of community and residential aged-care participants

Sample	Marital Status (%)			
	<i>Single</i>	<i>Married/De facto</i>	<i>Widow</i>	<i>Separated /Divorced</i>
Community	4.0	29.7	58.4	7.9
Residential	7.9	9.9	75.2	6.9

Table 2

Descriptive statistics for Satisfaction, Primary Perceived Control and Secondary Perceived Control in both the community and residential aged-care participants

Domain	Sample	Satisfaction		Primary PC		Secondary PC	
		<i>M (SD)</i>	<i>N</i>	<i>M (SD)</i>	<i>N</i>	<i>M (SD)</i>	<i>N</i>
Life	<i>Community</i>	8.07 (1.73)	99	8.13 (1.66)	99	-	-
	<i>Residential</i>	7.70 (2.02)	101	7.20 (2.51)	101	7.67 (2.47)	101
Standard of Living	<i>Community</i>	8.16 (1.62)	100	7.82 (1.88)	101	7.96 (2.22)	101
	<i>Residential</i>	8.02 (1.90)	101	6.99 (2.80)	101	7.87 (2.08)	101
Health	<i>Community</i>	6.79 (2.12)	101	6.68 (2.23)	101	7.39 (2.30)	100
	<i>Residential</i>	6.84 (2.47)	101	5.89 (3.30)	101	7.42 (2.36)	101
Achieving in Life	<i>Community</i>	7.23 (1.91)	99	7.15 (2.32)	100	7.43 (2.11)	100
	<i>Residential</i>	6.92 (2.43)	101	6.54 (2.87)	100	7.37 (2.61)	100
Relationships	<i>Community</i>	7.81 (2.11)	98	7.71 (2.11)	100	7.84 (2.13)	97
	<i>Residential</i>	8.29 (1.76)	101	7.78 (2.17)	101	7.88 (2.18)	101
Safety	<i>Community</i>	8.10 (1.64)	99	7.81 (1.88)	101	7.56 (2.20)	101
	<i>Residential</i>	8.79 (1.49)	101	7.81 (2.55)	101	8.55 (1.70)	101
Community Connection	<i>Community</i>	7.33 (2.13)	101	7.22 (2.20)	101	7.51 (2.19)	101
	<i>Residential</i>	7.80 (1.92)	101	7.10 (2.55)	101	7.99 (2.10)	101
Future Security	<i>Community</i>	7.79 (1.81)	96	7.51 (2.01)	100	7.63 (2.08)	100
	<i>Residential</i>	8.00 (2.26)	100	6.61 (3.07)	101	8.09 (2.17)	101
Spirituality	<i>Community</i>	7.87 (2.10)	75	8.31 (1.80)	58	7.59 (2.43)	63
	<i>Residential</i>	8.90 (1.53)	79	8.69 (1.93)	80	8.58 (1.95)	80

Table 3

Impact of residential status on the correlational strength of satisfaction and primary and secondary perceived control

Domain		Community		Residential		z-score difference
		<i>n</i>	<i>r</i>	<i>n</i>	<i>r</i>	
Life Overall	PC	96	.57***	101	.41***	1.51
	SC	-	-	-	-	-
Standard of Living	PC	99	.65***	100	.62***	.37
	SC	99	.35***	101	.66***	-2.95**
Health	PC	100	.68***	101	.53***	1.63
	SC	99	.43***	101	.52***	-.81
Achieving in Life	PC	97	.66***	100	.59***	.84
	SC	97	.39***	100	.65***	-2.49**
Relationships	PC	96	.73***	101	.46***	2.93**
	SC	93	.44***	101	.50***	-.52
Safety	PC	98	.69***	101	.54***	1.65*
	SC	98	.51***	101	.54***	-.31
Community Connection	PC	100	.73***	101	.65***	1.15
	SC	100	.60***	101	.62***	-.14
Future Security	PC	94	.75***	100	.69***	.87
	SC	94	.56***	100	.65***	-.99
Spirituality	PC	56	.75***	79	.53***	2.14*
	SC	61	.46***	79	.47***	-.10

Note: *** significant at $p < .001$; ** significant at $p < .01$; * significant at $p < .05$.

PC = Primary perceived control SC = Secondary perceived control

Table 4

Variance accounted for in satisfaction by primary and secondary perceived control

Domain	Group	n	Total <i>r</i>²	Prim PC unique <i>r</i>²	Sec PC unique <i>r</i>²	Shared <i>r</i>²	z-score difference (unique <i>r</i>²)
Life Overall	<i>Com</i>	-	-	-	-	-	-
	<i>Res</i>	97	.226	.042	.057	.127	-.245
Standard of Living	<i>Com</i>	97	.402	.156	.045	.201	1.39
	<i>Res</i>	97	.488	.116	.080	.292	.441
Health	<i>Com</i>	100	.497	.312	.041	.144	2.97**
	<i>Res</i>	101	.390	.120	.105	.165	.174
Achieving in Life	<i>Com</i>	96	.418	.229	.010	.179	2.87**
	<i>Res</i>	98	.524	.095	.114	.315	-.231
Relationships	<i>Com</i>	90	.443	.152	.032	.259	1.52
	<i>Res</i>	99	.373	.128	.044	.201	1.12
Safety	<i>Com</i>	97	.485	.196	.028	.261	2.11*
	<i>Res</i>	97	.253	.013	.101	.139	-1.47
Community Connection	<i>Com</i>	99	.544	.131	.029	.384	1.44
	<i>Res</i>	100	.497	.089	.091	.317	-.031
Future Security	<i>Com</i>	97	.607	.264	.044	.299	2.38**
	<i>Res</i>	93	.558	.178	.062	.318	1.34
Spirituality	<i>Com</i>	53	.701	.155	.166	.380	-.077
	<i>Res</i>	76	.382	.078	.140	.164	-.640

*Note: ** significant at $p < .01$; * significant at $p < .05$.*