

# Economic Hardship Among Older People in New Zealand: The Effects of Low Living Standards on Social Support, Loneliness, and Mental Health

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By 2026 people aged 65 and over are projected to make up approximately 20% of the population of New Zealand. A focus on the positive aspects of ageing includes consideration of the factors that promote good mental health in the population. In the present study of early old age (65-70 years) we highlight factors that are amenable to social and structural change in order to support positive ageing as people move into retirement. Analysis of cross-sectional survey data from 1761 people aged 65-70 was used to test the prediction that economic living standards are related to social support and loneliness (taking into account gender and ethnicity differences) and these factors in turn will affect mental health. Multiple regression analysis showed that lower living standards are both independently related to mental health and also contribute to diminished opportunities for social support. Social support and loneliness in turn, are related to mental health. Such observations suggest the importance of changes in social attitudes and social policy to build societies in which older people are valued and supported both economically and socially.

By 2026 it has been estimated that people aged 65 and over will make up approximately 20% of the population of New Zealand (Statistics New Zealand, 2005). These demographic changes, which reflect international trends, call for reconsideration of the conventional ways of understanding decrements in mental health and cognitive functioning as part of an inevitable decline in older age. In response to increases in life expectancy and rapid increase in the older population, social policy has shifted toward a focus on 'positive ageing' and an interest in addressing the factors that will affect wellbeing in older age. One important aspect of wellbeing is mental health. Mental illnesses, including anxiety and depression as well as dementia and psychiatric disorders are "widespread among the elderly in OECD countries and can lead to entry into institutional care" (Oxley, 2009). Alarming, of 10 OECD countries, New Zealand has been shown to be second

only to the USA in lifetime prevalence of mental health disorders (Chapple & Ladaique, 2009). From a population health perspective, two important aspects of people's social lives have been shown to be reliably related to their mental health are economic hardship (Wilkinson, 2005) or poverty (Belle, 1990) and social support (Berkman, 2000) or loneliness (Cornwell & Waite, 2009). The social position of older people in our societies puts them at risk for both poorer economic well-being and lower social support or more loneliness, compared to the rest of the population. Thus, experiences of old age include risk of poorer mental health, lower social support, and increased poverty and these are not experienced separately by elders, but have intertwined effects which we will explore in this paper.

## *Poverty and living standards*

It is expected that older people who have left the workforce will be over-

represented in the lower parts of income distribution in western countries (Zaidi, 2008). Thus, older people are one of the groups seen as particularly vulnerable to poverty. In particular, the economic differences of working life continue to influence life-styles and activities in old age (Vincent, 1995) and those with lower incomes, especially women or indigenous peoples in colonised countries, carry the health vulnerability of lower socioeconomic status (SES) into retirement and older age (Walker, 2009). Chandola, Ferrie, Sacker, & Marmot, (2007) showed that, in the UK, the economic inequalities of working life and their effects on mental health are amplified for people in early retirement. Other research has shown the same and sometimes worsening effects of lower SES on health across older age (e.g., Arber & Ginn, 1995; Johnson & Falkingham, 1992; Walker, 1993).

Marmot (2004) has described the effects of deprivation in affluent societies as different from the starvation of absolute poverty, but nevertheless, as having observable effects on health and mortality. The basic approach to assessing poverty and those at risk is to measure income. This assessment depends on where the poverty line is set; 50% or 60% of the median income for the overall population has become the accepted way of defining financial poverty in European countries (Zaidi, 2008). In New Zealand, universal superannuation from the age of 65 provides a floor above the 50% threshold. Thus, comparing rates of poverty with OECD countries using this threshold

gives New Zealand the best overall ranking. Some individuals may even improve their income when they reach 65. However, if an individual has no savings and no home ownership they may be living in hardship. Using the 60% threshold (as used by the European Union) in the year to June 2004, 6.4 percent of the older population (above 65) in New Zealand, were assessed as living below the poverty line. The proportion of older people living below this threshold has been as high as 8% since 1988, but stabilised at 6.4 percent from 2001 (Ministry of Social Development, 2007).

Zaidi (2008) notes that the assessment of poverty in affluent societies is complex and must take into account the multidimensional nature of wellbeing for older people. Once we start to consider other aspects of economic status such as home ownership, other material resources, and dependent family members, attention shifts to using a standard of living approach to assess economic wellbeing. Determining the physical circumstances of people's lives as part of the effects of income plus other constraints is a useful way to conceptualise poverty in affluent societies. Such an approach takes into account material resources and people's ability to participate in society and be a respected member of that society (cf., Marmot, 2004).

In the New Zealand Living Standards 2004 survey (Jensen, et al., 2006), the average living standard of older New Zealanders was not significantly related to their income and there was a great deal of variability in living standards within each income band. An important variable here was accommodation costs. As might be expected, mortgage-free homeowners were more likely to report higher living standards than renters on the same income (Ministry of Social Development, 2007). In the New Zealand Living Standards survey, eight percent of older New Zealanders reported living in hardship (severe, significant or some). This population survey also showed that these circumstances diminish with age which may be an effect of increased mortality for those at the lowest end of the SES scale. The proportion of older people in some degree of hardship was 12 percent for 65–69 year olds, 11

percent for 70–74 year olds, 4 percent for 75–79 year olds, and 4 percent for people aged 80 years and over. Although the percentages of older adults living in hardship are relatively small in our society at present, they are sufficient to warrant concern and also reason to believe that with decreasing home ownership among succeeding generations these percentages will increase (Waldegrave, Cameron, & King, 2009).

### *Social Support and Loneliness*

Elders have tended to be a neglected minority in western societies (Cann & Dean, 2009) and although the ageing population has sparked some new public interest in the well-being of elders, the interrelationships of stereotypes, prejudice, stigma and fear of ageing (Braithwaite, 2002) results in discrimination and neglect (Nelson, 2002). Accordingly, Bernard & Smith (1998) suggest that assessments of material deprivation should also include other related factors, such as differences in social support. Lower perceptions of social support may be caused by increased social exclusion and vulnerability.

The social and physical vulnerability of older poorer community dwelling adults in New Zealand has been revealed in a case study of a disaster (Tuohy, Stephens, & Johnston, 2009). Older adults living in council housing were at increased risk during a flood for several reasons. Their low cost 'pensioner' houses were located near a flood-prone stream and separated from other houses, so that when a flood arose they suffered the effects of low social support. They had no neighbours to assist them, and were then inadvertently neglected by civil defence workers until the moment of evacuation, during which they were endangered and lost their treasured possessions and furniture. Apart from housing, older adults in our society may also be excluded through aspects of everyday life such as loss of social networks, poor provision of appropriate transport or footpaths, and low availability of appropriate services (see Schofield, Davey, Keeling, & Parsons, 2006). Those adults who experience economic hardship are also more likely to experience such social vulnerability and exclusion and

hence have lower perceptions of social support.

Lower perceptions of social support may also be related to loneliness. Although researchers often agree that social support and perceptions of loneliness (or lack of social connectedness) are conceptually and empirically related (e.g., Bell & Gonzalez, 1988; Newcomb & Bentler, 1986; Perlman & Peplau, 1981), Rook (1984) has carefully distinguished between conceptualisations of social support (as the various provisions of social relationships) and loneliness, which she describes as perceived social isolation which is emotionally painful (p.255). Important differences in the health effects of perceptions of loneliness and social support have also been observed. For example, Ashida and Heaney (2008) compared perceptions of social connectedness (the inverse of isolation) and of social support in older adults to show that only perceived social connectedness was negatively related to health outcomes. Thus, the literature suggests that a sense of social connection is linked to perceptions of social support, but is also a need in itself. Older adults are particularly at risk of the mental health effects of social isolation (Antonucci, Fuhrer, & Dartigues, 1997; Cornwell & Waite, 2009; Pettigrew and Roberts, 2008). In New Zealand, Alpass, and Neville (2003) found that loneliness was related to depression in older men. LaGrow, Neville, Alpass & Rodgers (2010) found that 53% of a New Zealand sample of men and women over 65 reported moderate or severe loneliness and emotional loneliness predicted poorer mental health.

### *Living standards, social support and mental health.*

These aspects of older people's lives may be seen as a cascading series of effects on their mental health. Economic hardship is one of the important factors that can influence older people's perceptions of social support. Perceptions of social support and feelings of loneliness have been established as an important factor in regards to the mental health of older people. In considering these relationships in the general population there are at least two additional

demographic variables that must be taken into account: gender and ethnicity. Since women have been shown to be generally poorer than men, and elderly women are poorer than middle-aged women (Vincent, 1995), gender remains an important consideration in exploring the relationships between inequalities and health outcomes. In New Zealand, ethnic differences, and particularly differences between Māori and non-Māori in SES and health (e.g., Blakely, Fawcett, Hunt, & Wilson, 2006; Howden-Chapman, Blakely, Blaiklock, & Kiro, 2000; Sporle, Pearce, & Davis, 2002) must be considered. In the 2004 Household Economic Survey, the small sample of older Māori meant that ethnic breakdowns were not viable (Ministry of Social Development 2007) although we know that older Māori have lower living standards in general than older non-Māori (Cunningham, et al., 2002)

In the present study of early old age (65-70 years) we wish to highlight factors that are amenable to social and structural change in order to support positive ageing as people move into their retirement years. This study will test the prediction that economic living standards are related to perceptions of social support and loneliness (taking into account gender and ethnicity differences). These factors in turn are predicted to affect mental health.

## Method

### Participants

The Health Work and Retirement Study has surveyed New Zealanders aged 55 to 70 who are generally in the later stages of work life or early stages of retirement. The New Zealand Electoral Roll was the source for sample selection. Registration on the roll is mandatory for all citizens eligible to vote in government elections and in 2007, 96% of all eligible New Zealanders were registered. Equal probability random sampling procedures were used to select two independent samples to represent the general population (which includes Māori;  $N=5,264$ ) and the Māori only population ( $N=7,781$ ). Māori were over-sampled for this study using the Māori descent indicator on the electoral roll to maximise participant recruitment and provide sufficient numbers for statistical analysis in later

data collection waves. In total 13,045, 55 to 70-year olds were surveyed. The total response rate (after exclusions, e.g., unable to be contacted, deceased, or institutionalised) was 53% ( $N=6,662$ ). Of these 6,662 individuals, 3117 (47%) identified their primary ethnicity as Māori and 3545 (53%) were classified as non-Māori. For the purposes of this analysis, a sub-sample of those aged 65 to 70 was selected ( $N = 1721$ ;  $M = 67.06$ ). This group included 131 Māori and 1589 non-Māori which, despite over-sampling, reflects the increasingly lower percentage of Māori at greater ages in the New Zealand population. Gender was more evenly distributed with 842 males and 870 females,

### Measures

The measures used in this study were included in a postal questionnaire designed to measure individual factors related to retirement, well-being, and independence. The following measures were chosen for this analysis.

**Mental health status** Health was assessed using the SF36 Health Survey (Ware, Kosinski, & Dewey, 2000), a widely used reliable and validated measure of generic health status. The SF36 has 8 sub-scales which were combined using principle components (orthogonally rotated) derived coefficients to form two components assessing physical and mental health. The mental health component summary score (SF 36 MHS) was standardised (using norms from the present representative study) with lower scores implying poorer health. Cronbach's alpha reliability coefficient for the mental health summary score was .90. The mean score for the present sample was 52.08 ( $SD = 8.51$ ).

**Economic Living Standards.** The Economic Living Standards Index short form (ELSI-SF; Jensen, Spittal and Krishnan, 2005) was developed in New Zealand to measure levels of consumption, social activity, and asset ownership, rather than the economic resources that enable them. The scale assesses restrictions in ownership of assets (8 items), restrictions in social participation (6 items), the extent to which respondents economise (8 items), and a self-rated indicator of

standard of living (3 items). The ELSI-SF scores on each of the items were combined to form a continuous variable ranging from 0 to 31 (higher scores reflect higher economic living standards) and as an ordinal variable with 7 levels from severe hardship to very good (see Jensen et al., 2005 for a complete description). For the continuous variable, Jensen et al., reported a Cronbach's alpha of 0.88 and alpha in the present sample was .81. Mean score in the present sample was 23.30 ( $SD = 5.80$ )

**Social Support.** Perceived social support was assessed using the Social Provisions Scale which measures different types of perceived support from a variety of sources. Cutrona & Russell (1987) describe the development of this scale to assess the six relational provisions: Attachment, Social Integration, Reassurance of Worth, Reliable Alliance, Guidance, and Opportunity for Nurturance. Respondents rate the extent to which each of four statements describe how their social relationships are currently supplying each of the provisions using 4-point scales (from *completely true* to *not at all true*). The scores are summed for each social provision (0-16) and a total social support score is also formed by summing the six individual provision scores (0-96). Cutrona and Russell report alpha coefficients for the total scale score from .85 to .92 across a variety of populations and Cronbach's alpha for the present sample was .89. The mean score for the present sample was 78.35 ( $SD = 9.61$ ).

**Gender** was male (0) or female (1).

**Ethnicity** was measured as Māori (0) or non-Māori (1) according to self-identification by participants.

**Loneliness** was measured with a single items asking participants: "In the last 12 months how often have you felt lonely or isolated?" to be answered on a 5 point scale ranging from 'always' to 'never'. Lower scores indicate higher loneliness and for this sample,  $M = 4.27$  ( $SD = .82$ ).

### Procedures

The postal survey used multiple contact points to maximise participation

Table 1: Distribution of ELSI-SF levels in the sample.

Level	N	Percent
Severe hardship	41	2.4
Significant hardship	52	3.0
Some hardship	91	5.3
Fairly comfortable	175	10.2
Comfortable	346	20.1
Good	560	32.6
Very good	226	13.1
Total	1491	86.7

Note: 229 missing

(Dillman, 2000).

1. A brief pre-notice letter was sent to inform potential participants about their selection and the questionnaire study.

2. One week later, the questionnaire, a detailed information sheet and a free-post return envelope were sent.

3. At 3 weeks a reminder postcard was sent to the whole sample.

4. At 6 weeks a replacement questionnaire was sent to all non-respondents.

5. At 11 weeks a final postcard was sent to all non-respondents.

These procedures were approved by the Massey University Human Ethics Committee.

### Analysis

A post-stratified weighting variable according to primary ethnicity was applied to all analyses. The weighting variable was based on the population estimates from the 2001 census (Statistics New Zealand, 2002) for the 55 to 70-year-old age group.

Pearson's  $r$  correlation coefficients were used to test bivariate relationships among all study variables. To test the hypothesis that Social Support (SPS and Loneliness) mediates the relationship between Economic Living Standards (ELSI-SF) and Mental Health (SF 36 MHS) the procedure recommended by Baron and Kenny (1986) was used. The significance of the relationships between SPS and Loneliness with SF 36 MHS was tested with Pearson's  $r$ . A hierarchical multiple regression equation was then used to test the proposed mediation. At the first step, SF 36 MHS was regressed on ELSI-SF (to test the significance of this relationship). At the

second step SPS and Loneliness were added into the equation as predictors to test the mediation effect.

### Results

Table 1 shows the N and percentage of the sample for each level of the ELSI-SF. Ten and a half percent report some form of hardship, while the largest group (32.6%) reported a 'good' standard of living. Figure 1 shows the mean SF 36 MHS score for each level of ELSI-SF with significant differences between the groups ( $F(6, 1386) = 22.90, p < .001$ ) and illustrates a correlation between mental health and levels of living standards. In general, the mental health of the groups increases, as the levels of economic living standards rise. The most striking difference between the levels shows that those in the poorest mental health also report extreme hardship.

Table 2 shows the bivariate

correlations between the study variables. Gender is weakly related to ELSI-SF and loneliness such that women are more likely to report lower living standards and more loneliness. Ethnicity is similarly related to these variables and SF 36 MHS, so that Māori are more likely to report poor mental health, lower living standards, and more loneliness. SF 36 MHS scores are positively and moderately related to ELSI-SF, SPS, and loneliness as predicted; i.e., lower perceptions of social support and more loneliness are related to lower mental health.

Table 3 shows the results of the regression equation conducted to test whether social support and loneliness mediate the relationship between economic living standards and mental health.

At the first step SF 36 MHS was regressed on gender and ethnicity (to control for their relationships with the study variables). Gender did not significantly contribute to the equation so ethnicity contributed most of the .5% variance in mental health explained (Adj.  $R^2 = .005, F(2, 1271) = 4.49, p < .05$ ).

At the second step ELSI-SF accounted for an additional 7.5% of the variance in SF 36 MHS ( $R^2 \Delta = .075, F(3, 1270) = 38.00, p < .001$ ).

At the third step SPS and Loneliness contributed an additional 15% of explained variance ( $R^2 \Delta = .146$ ) and all variables together explained 23% of the

Figure 1: Graph showing mean SF 36 MHS scores at each level of ELSI-SF

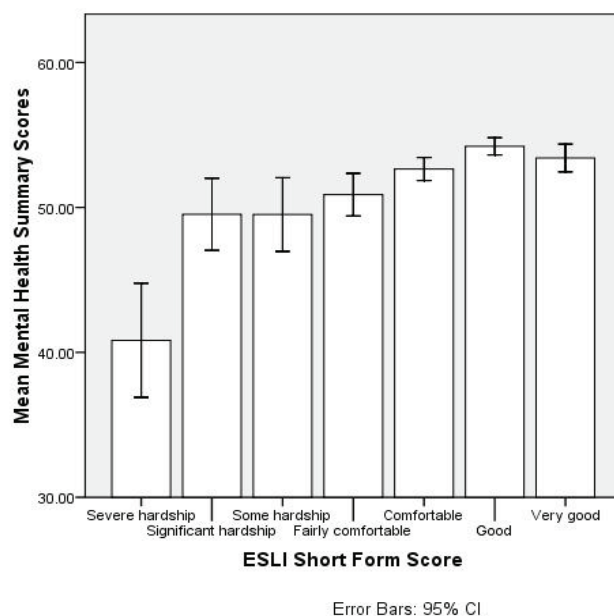


Table 2. Bivariate correlations (Pearsons r) for all study variables

	SF36				Māori/ Non-Māori
	MHS	SPS	Loneliness	ELSI-SF	
SPS	.329**	1			
Loneliness	.399**	.353**	1		
ELSI-SF	.263**	.226**	.234**	1	
Māori/ Non-Māori	.082**	.031	.076**	.094**	1
Gender	-.016	.039	-.098**	-.091**	-.017

variance in SF 36 MHS scores, (Adj.  $R^2 = .226$ ,  $F(5, 1268)=75.11$ ,  $p<.001$ ). At this step the Beta for SF 36 MHS on ELSI-SF was reduced by .11 from .28 to .17. The effect of living standards on mental health was partially explained by including the social support and loneliness variables in the analysis. Loneliness was revealed to have the strongest effect on mental health with a Beta of .30.

The results of the regression equation show that, as predicted, economic living standards are significantly related to mental health, such that those with lower living standards are more likely to report poorer mental health. This equation additionally tested the prediction that this relationship is mediated by social support and loneliness. It showed that social provisions and loneliness did indeed significantly reduce the amount of variance in mental health explained by economic living standards. This finding suggests that, poorer living standards are directly related to mental health. In addition, the relationship between economic living standards and mental health is partially explained by differences in perceptions of social

support and feelings of loneliness.

## Discussion

Together our findings support predictions based on the international findings described above, that there are social factors such as economic hardship and social support which are related to mental health. Furthermore, our analysis demonstrates interrelationships between economic hardship and diminished perceptions of social support, which are in turn related to poorer mental health. These are cross-sectional data and whether hardship and lower social support causes poorer mental health, or mental health is affecting opportunities for social support and the economic living standards of these 65-70 year olds is unknown and the direction of these effects requires further investigation. At present, these results support suggestions that these important aspects of older people's lives are interrelated.

Neither gender nor ethnicity offered explanations of differences in population mental health statistics in their own right. Although other studies have shown gender differences in the mental

health of elders (e.g., Keith, 1993), there were no differences for men and women in this younger sample. Māori, were more likely to report poorer mental health as has been previously found by Scott, Sarfati, Tobias, & Haslett (2000), although these authors also questioned the validity of the SF36 mental health summary scores for older Māori and therefore the differences observed here remain in question pending further investigation of the use of this measure in New Zealand. However, the mental health differences in this sample were largely explained by lower perceptions of social support and particularly more feelings of loneliness, which supports the importance of investigating these social context variables.

Considering factors such as hardship and social support, shifts our attention from individual issues related to mental health problems to broader social issues that must be addressed at a broader level of intervention. The population represented by our sample is relatively young and there are opportunities to support improvements in the mental health of vulnerable members of this cohort as they age by addressing these social issues. By highlighting the importance of social support and economic wellbeing we can develop population focussed ways to enhance mental health and general wellbeing among older people as the population of elders grows and hardship is likely to increase.

Social support and connectedness may be one area for increased attention. Social support is well understood as a fundamental aspect of wellbeing for any member of the whole population (Ashida & Heaney, 2008). However, older people have been shown to be more at risk of isolation and social exclusion. Psychological intervention can focus on both situated support in therapeutic situations and contributions to support within a broader social support structure. There are opportunities to support and draw upon the work of NGOs, such as Age Concern, who offer interventions to ensure health care, support and socialising opportunities for elders.

As we work with older people we should also be alert to the subtle effects of ageism in our society which has broad ranging effects on the workings

Table 3. Hierarchical multiple regression of SF 36 Mental Health Summary Scores (N = 1274) on Ethnicity, Gender, ELSI-SF, SPS and Loneliness

Predictors	Step 1 $\beta$	Step 2 $\beta$	Step 3 $\beta$
Māori/ Non-Māori	.082*	.057*	.042
Gender	.016	.037	.047
ELSI-SF		.277***	.167***
SPS			.182***
Loneliness			.297***
<b>R</b>	.084*	.287***	.478***
<b>Adj. R<sup>2</sup></b>	.007*	.082***	.229***
<b>R<sup>2</sup> <math>\Delta</math></b>		.075***	.146***

Note: \* $p < .05$ , \*\*\* $p < .001$

of institutions, workplaces, and social policy (Nelson, 2002). Minkler and Cole (1991) have pointed to the “demeaning of old age and the marginalization of the elderly that is now embedded in the bureaucratized life course of the welfare state...” (p. 43). Such observations suggest that an important aspect of social support is the attitudes manifested by institutional practice, and health professionals must be alert toward the ways in which elders may be marginalised and excluded in taken for granted ways in health care and support systems.

Furthermore, this analysis has shown that economic hardship should be taken into account when we are concerned with social support, loneliness and mental health. A similar proportion of people in this 65 to 70 year old age group reported hardship (10.7%) as in previous New Zealand surveys (12%; Ministry of Social Development, 2007). This suggests that there is a cost for social participation which may be denied to older people on low incomes who live with constrained social networks because they do not have the resources to participate.

As has been shown in previous surveys, there are relatively low proportions of older New Zealanders who report severe hardship (2.4%). Nevertheless, this group must be of concern now and in the future, particularly as they have significantly worse mental health. Several studies have found that economic hardship increases mental distress (Mirowsky & Ross, 2001) and Belle (1990) has summarised the well known association between poverty and mental health problems in psychiatric epidemiology: “Decades of research find poverty to be a correlate of psychological distress and diagnosable mental disorder.” (p 385). For example, Lima-costa, Barreto, Firmo and Uchoa (2003) reported that among a Brazilian group, poorer elderly reported more psychiatric symptoms than those who were even slightly better off. According to a recent OECD health working paper, policies to address the wider social determinants of mental health, such as poverty and discrimination will be required (Oxley, 2009). Thus, it is at the social policy level that prevention of social issues

such as hardship among elders and their effects on perceptions of support and isolation, and mental health in the population must be addressed.

Broader social and professional attitudes have a role to play in social policy changes. The whole of society, including health professionals who work with elders, need to understand the effects of social and economic exclusion on elders and consequently on the wellbeing of our whole society. This requires expectations of, and contributions to, the development of social policies that will build a society in which older people are valued and supported both socially and economically.

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