6 What Factors are Associated with Change in Older People's Quality of Life?

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tilda
Staidéar Fadaimseartha na hÉireann um Dhul in Aois
The Irish Longitudinal Study on Ageing

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Key Findings

- Self-reported quality of life peaks around 65-67 years, and declines rapidly after the age of 80.
- Between wave 1 and wave 2 of TILDA, overall quality of life declined for all age groups, but the decline was greatest for those aged 75+ years.
- Those who were married at both waves have a higher quality of life than those who remain never married, divorced/separated, or widowed between waves.
- Those who reported that they no longer suffer from a disability in relation to activities of daily living (e.g., dressing, eating, bathing) have a significantly higher quality of life than those reporting a disability in both wave 1 and wave 2.
- TILDA participants whose depressive symptoms had remitted between wave 1 and wave 2 experienced a significant improvement in quality of life.
- Based on their social networks (i.e., marital status, close ties with family and friends and membership of voluntary and religious organisations), 27% of men and 22% of women in TILDA are classed as 'most socially integrated', and these proportions have only changed slightly between wave 1 and wave 2 of the study.
- Participants with strong social networks, who engage in various types of active social relationships and who volunteer regularly have a higher quality of life than those who are less socially active.
- Overall, 35% of TILDA participants look after their grandchildren for at least one hour a week, and those who care for their grandchildren have a higher quality of life than those who do not.

6.1 Introduction

The demographic shift in the number of people living into late life brings with it a number of challenges; not least of which is how to ensure that gains in longevity are matched by

gains in quality of life so that the ageing population can continue to participate in society and enjoy life into old age. In fact, the promotion of healthy ageing now features as a major component of public health strategy in most developed countries (1, 2). This has contributed to an increase in the volume of research that is concerned with investigating older people's quality of life, the factors that contribute to it, and the potential ways in which it can be enhanced (3). Monitoring trends in quality of life is important from a public policy perspective because it allows one to examine how the quality of life of society is changing over time coincident with demographic transitions, technological progression, changes in the social environment, and emerging social policies. As summarised by Netuvelli and Blane (3), interest in quality of life during later life stems from the belief that the older population are more vulnerable in this regard because of: 1) declining physical and mental health status, 2) exit from the labour market, 3) changes in family circumstances (e.g. migration of children), and 4) isolation due to death of contemporaries or the inability to participate as an active member of the community.

Despite this burgeoning interest in quality of life research, consensus around a definition for quality of life remains elusive and there exist many different measures for assessing it (4). For one thing, quality of life is often confused or considered synonymous with successful ageing. Although there is substantial conceptual overlap between the terms, and reciprocity in the sense that quality of life can be viewed as a cause or a consequence of successful ageing, there are also some important differences. For example, many definitions of successful ageing would view the presence of disease as antithetical to healthy ageing whereas quality of life research tends to be less prescriptive in this regard. A recent meta-analysis of 29 studies (5) found that estimates regarding the proportion of successful agers ranged from 0.4% to 95% because of widely varying operational definitions of what constitutes success in ageing terms. Averaged across studies, approximately one third of older people were characterised as ageing successfully. However, these findings conflict strongly with the results emerging from studies in the UK (6, 7) and Ireland (8) which show that older people continue to enjoy a high quality of life well into their later years despite increasing levels of morbidity.

Researchers have also debated whether quality of life should be measured using objective or subjective measures (9, 10), and these disputes largely reflect different disciplinary interpretations of what quality of life comprises and how it should be assessed. Objective assessments typically involve economic (e.g. standard of living), social (e.g. social networks) or health-related (e.g. healthy life years) indicators, whereas subjective measures tend to involve self-appraisal of social, emotional and psychological well-being, such as life satisfaction and happiness. This latter approach takes the view that a good

life is one that is experienced as such and has tended to predominate in social science research in recent years (3). TILDA uses such a measure to index quality of life among the older population.

This chapter uses TILDA data to describe variations in quality of life across the age spectrum before going on to explore the extent of change in older people's quality of life between wave 1 and wave 2 by important demographic characteristics such as age and sex. In these sections we also consider whether quality of life is affected by various changes in older people's lives, such as changes in marital status, employment status, disability, depression, social engagement and caring.

6.2 Measuring quality of life

Quality of life in TILDA is indexed using the CASP-19 measure, which is a brief (19-item) self-report inventory that is designed to measure quality of life independent of the factors that might influence it such as health, social supports and material circumstances (11). Participants indicate the extent to which they agree with each statement on a four-point frequency scale ranging from 'Often' through 'Never' and responses are scored such that the most positive responses are given a score of 3 and the most negative responses are given a score of 0. The instrument produces scores for each of four subscales: control, autonomy, self-realisation, and pleasure. These subscales are considered important dimensions of quality of life among older people. A total quality of life score is calculated by summing scores across the four subscales with a higher score indicating a higher quality of life (range 0-57). The instrument has been used to measure quality of life in other longitudinal ageing studies such as the English Longitudinal Study of Ageing (ELSA) and the Survey of Health, Ageing and Retirement in Europe (SHARE). It has been shown to be responsive to changes in the participant's circumstances over time that reflect changes in quality of life (12). Table 6.1 describes the dimension of quality of life that is measured by each subscale of the measure and a sample item for each subscale.

Results from wave 1 of the TILDA study (13) established that the majority of older people in Ireland enjoy a high quality of life and that the Irish population score higher than their English counterparts in terms of quality of life. Nevertheless, there were some important variations in quality of life across the older population with those from more disadvantaged socio-economic backgrounds having lower self-rated quality of life for example. Similarly, those who lived alone had lower scores compared with those who were living with a partner. There was also a curvilinear relationship between age and quality of life with those in the 64-74 age group having the highest quality of life ratings. Wave 2 of TILDA affords

the opportunity to look at changes in quality of life and the factors associated with change over a two-year follow-up interval in a population of community-dwelling adults who were aged 50 years and over at baseline, i.e., wave 1. We restrict the analysis to include only those participants for whom we have a self-reported quality of life measure at both waves (n=4,423). This chapter will explore change in quality of life using a simple metric known as the change score which represents intra-individual (within-person) variation in scores over time and is calculated as follows:

Change score = (wave 2 quality of life score – wave 1 quality of life score)

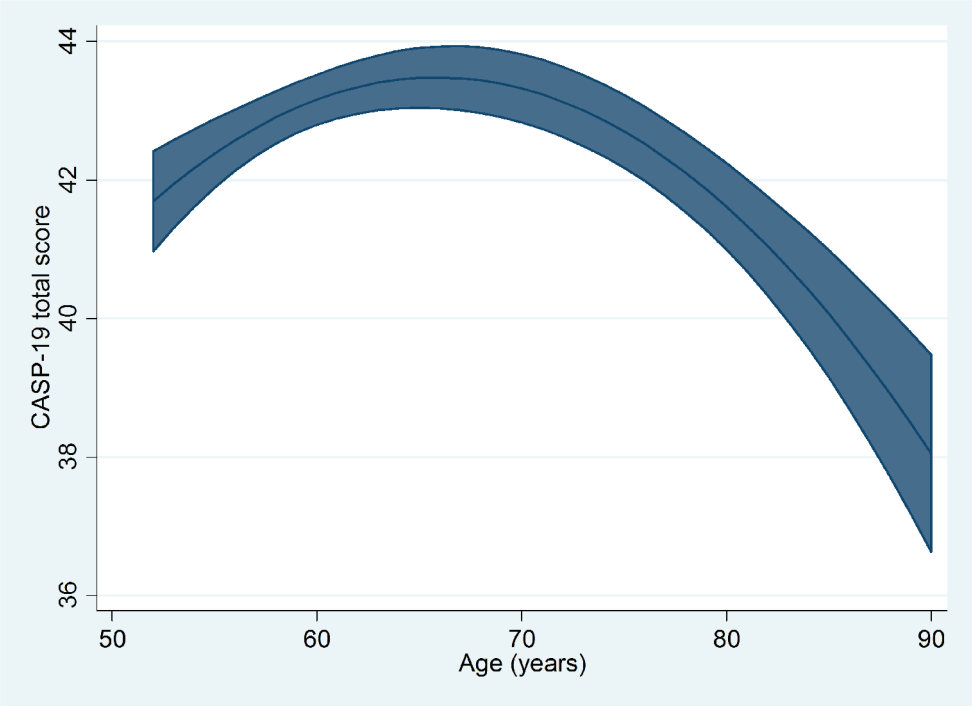
Table 6.1: Scale composition and sample items on the CASP-19 quality of life measure

Scale	Description	Sample item	No. of items	Score Range
Control	The ability to actively participate in one's environment	'I feel what happens to me is out of my control '	4	0-12
Autonomy	The right of the individual to be free from the unwanted interference of others	'I can do the things that I want to do'	5	0-15
Self-realisation	The fulfilment of one's potential	'I feel that my life has meaning'	5	0-15
Pleasure	The sense of happiness or enjoyment derived from engaging with life.	'I feel satisfied with the way my life has turned out'	5	0-15
CASP-19 total score	Sum of the four CASP-19 subscales	-	19	0-57

6.3 Quality of life and age

The extent to which quality of life varies by age has been a subject of debate among scholars (6, 7, 14). Results from the first wave of ELSA showed that quality of life increases from 50 years of age onward, peaking at 68 years of age and declining gradually thereafter (7). An interesting finding to emerge from the ELSA analysis was that quality of life only decreased below the value recorded among 50 year-olds after 86 years of age. Similar patterns are evident in the TILDA data at wave 2. Figure 6.1 shows that quality of life increases from an average of 41.7 at 52 years of age, peaking at 43.5 between 65-67 years of age and drops off fairly rapidly after 80 years of age. The wider confidence intervals around the mean in later life reflect the fact that there is larger variation in scores as people age and there are fewer respondents in the older age groups.

Figure 6.1: Mean CASP-19 quality of life score at wave 2 by age



Of course, focusing on the overall quality of life measure disguises considerable heterogeneity within different facets of quality of life. If the measure is decomposed into its constituent parts then a more nuanced picture of how quality of life varies across the age spectrum emerges (see Figure 6.2). For example, the level of control older people feel they exert over their social environment peaks at about 58 years of age and declines fairly rapidly thereafter, whereas scores on the autonomy dimension continue to increase until about 74 years of age followed by a more shallow rate of decline in the years subsequent to this. Scores on the self-realisation dimension, which reflects the extent to which participants feel they have lived a fulfilling life peak at 64 years of age. A positive message to emerge from the TILDA data at wave 2 is that older people report high levels of happiness and enjoyment into later life with scores on the pleasure dimension of the CASP-19 continuing to increase as people age.

Table 6.2 summarises the mean score on the CASP-19 quality of life measure at wave 2 and the mean change in quality of life across waves and for each of the subscales. The mean score for the sample at wave 2 is 42.6 out of a total score of 57, which indicates generally high levels of quality of life in the TILDA cohort. Comparison of responses from wave 1 and wave 2 of the study reveals that the overall score on the CASP-19 quality of life measure decreased by 1.3 CASP units over the two-year follow up period (see Table 6.2). Statistically significant reductions in quality of life were observed across each of the

subscales that comprise the CASP-19 measure, but the decline was particularly marked on the control dimension, which reflects the ability to actively participate in one's social environment, and accounted for more than 40% of the reduction in quality of life over time. The rate of decline in quality of life was comparable for men and women as shown in Table 6.2.

A recent study utilising three waves of data from the ELSA cohort documented a higher rate of intra-individual decline in quality of life among the oldest old (14). Similarly, analysis of responses from wave 2 of the TILDA study reveals that quality of life declines across all age groups over the two-year follow-up interval, but the rate of decline is steepest for those in the oldest age group (see Table 6.3). The mean change in the overall CASP-19 quality of life score across waves is -0.83 CASP units among those aged 52-64 years, increasing through -1.48 CASP units for those in the 65-74 year age group, and -2.34 for those aged 75 years and above (see Table 6.3). Deterioration in self-rated quality of life between waves is evident across each age group for each subscale of the CASP-19 measure. The control subscale accounts for the largest proportionate drop in quality of life across all three age groups.

Figure 6.2: Mean scores on the control, autonomy, self-realisation and pleasure subscales of the CASP-19 quality of life measure at wave 2 by age

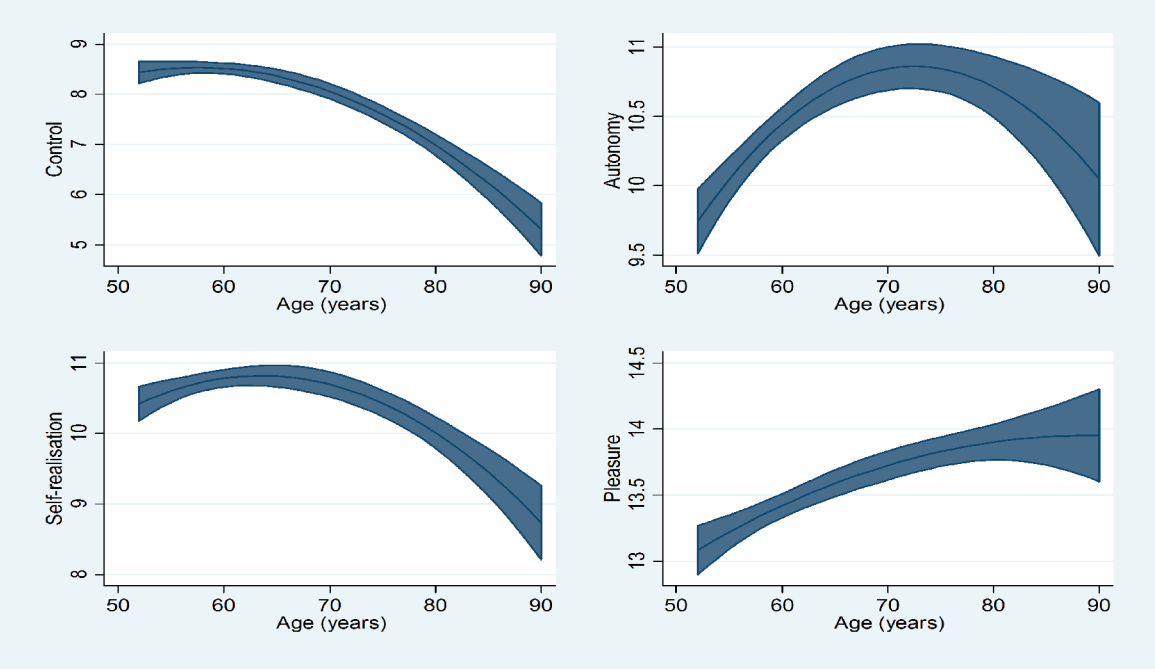


Table 6.2: Mean CASP-19 quality of life score at wave 2 and mean change in quality of life by sex

	Mean (W2)	95% CI	Mean Change	95% CI change score
		All		
Control	8.0	(7.9, 8.1)	-0.58	(-0.67, -0.49)
Autonomy	10.5	(10.3, 10.6)	-0.30	(-038., -0.21)
Self-realisation	10.5	(10.4 10.6)	-0.25	(-0.35, -0.15)
Pleasure	13.5	(13.4, 13.6)	-0.20	(-0.27, -0.13)
CASP-19 total score	42.6	(42.3, 42.9)	-1.33	(-1.56, -1.10)
		Male		
Control	8.1	(8.0, 8.2)	-0.53	(-0.65, -0.42)
Autonomy	10.5	(10.4, 10.7)	-0.28	(-0.39, -0.16)
Self-realisation	10.5	(10.4, 10.6)	-0.22	(-0.35, -0.09)
Pleasure	13.5	(13.4, 13.6)	-0.19	(-0.29, -0.10)
CASP-19 total score	42.7	(42.3, 43.0)	-1.22	(-1.53, -0.91)
		Female		
Control	7.9	(7.7, 8.0)	-0.63	(-0.76, -0.50)
Autonomy	10.4	(10.3, 10.6)	-0.32	(-0.44, -0.20)
Self-realisation	10.5	(10.4, 10.7)	-0.28	(-0.43, -0.13)
Pleasure	13.6	(13.5, 13.7)	-0.20	(-0.30, -0.11)
CASP-19 total score	42.5	(42.0, 42.9)	-1.43	(-1.77, -1.08)

Between-group comparisons reveal that participants aged 75 years and over experienced larger declines in quality of life across three of the four CASP-19 subscales (control, autonomy, self-realisation) compared with those in the 52-64 age group; while those in the 65-74 age group experienced larger declines on all of the subscales (control, autonomy, self-realisation and pleasure) compared with those aged 52-64. Interestingly, there are no significant differences between groups in terms of the rate of decline on the pleasure subscale of the CASP-19 which is a positive finding and suggests that this dimension of quality of life is less sensitive to decline across the age span.

Table 6.3: Mean CASP-19 quality of life score at wave 2 and mean change in quality at life score by age

	52-64 years			65-74 years			75+ years		
	Mean	95% CI	Change	Mean	95% CI	Change	Mean	95% CI	Change
Control	8.5	(8.4, 8.6)	-0.39	8.1	(7.9, 8.3)	-0.61	6.8	(6.5, 7.0)	-1.00
Autonomy	10.3	(10.1,10.4)	-0.10	10.8	(10.6, 11.0)	-0.35	10.6	(10.3, 10.9)	-0.72
Self-realisation	10.7	(10.5, 10.8)	-0.14	10.7	(10.5, 10.9)	-0.25	9.8	(9.5, 10.1)	-0.51
Pleasure	13.3	(13.2, 13.4)	-0.20	13.7	(13.5, 13.8)	-0.26	13.9	(13.8, 14.0)	-0.11
CASP-19 total score	42.8	(42.4, 43.2)	-0.83	43.3	(42.7, 43.9)	-1.48	41.1	(40.3, 42.0)	-2.34

6.4 Quality of life and marital status

A large number of studies have shown that people who are married report higher levels of happiness and life satisfaction compared with those who are not married (15). Transitions in marital status between waves was characterised using the classification shown in Table 6.4.[1] For example, 72.8% of TILDA participants were married at both waves, while only a small percentage (0.4%) divorced or separated between waves. The data show that participants who were married at both waves have a higher quality of life score compared with those who remained never married, divorced/separated, or widowed across waves. Another interesting trend to emerge from the data is that participants who were married at wave 1, but for whom circumstances had changed at wave 2 (i.e. had become divorced/separated or widowed), and those who were unmarried/divorced/separated/widowed at wave 1, but were married at wave 2, tend to score higher than those who were never married (although these differences are not statistically significant).

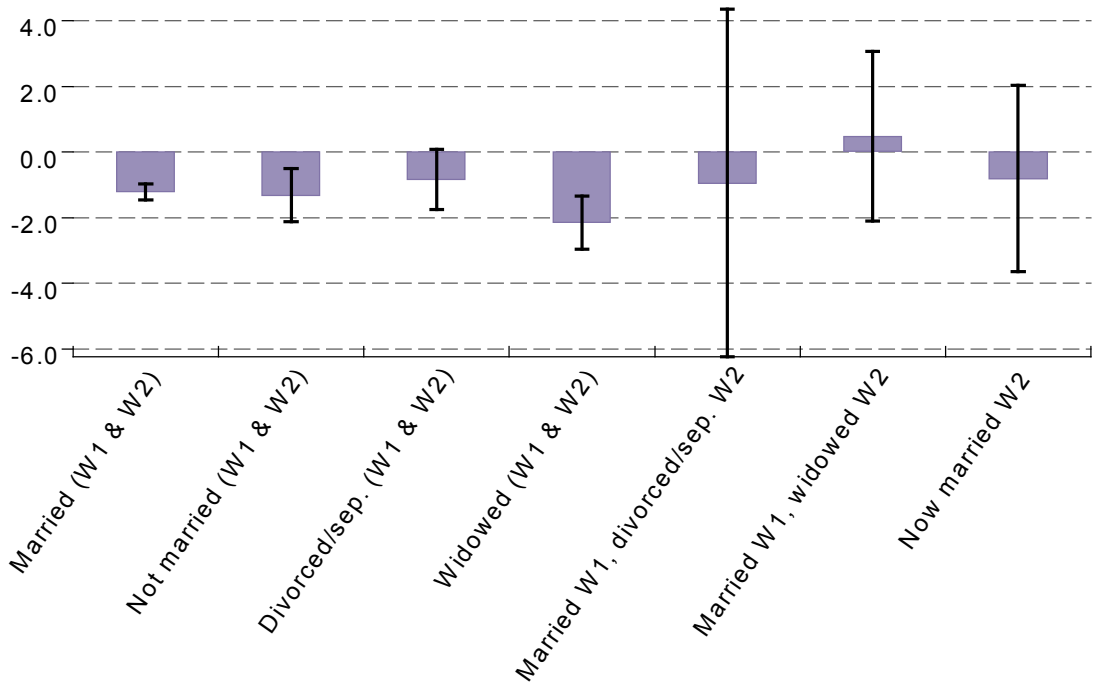
Table 6.4: Mean CASP-19 quality of life score at wave 2 by transitions in marital status

	% of the sample	Mean	95% CI
Married (wave 1 and wave 2)	72.8	43.2	(42.9, 43.6)
Never Married (wave 1 and wave 2)	8.0	41.2	(40.1, 42.1)
Divorced/Separated (wave 1 and wave 2)	6.2	41.0	(39.6, 42.5)
Widowed (wave 1 and wave 2)	11.2	41.2	(40.1, 42.3)
Married wave 1, Divorced/separated wave 2	0.4	43.4	(40.6, 46.1)
Married wave 1, Widowed wave 2	1.1	41.9	(39.6, 44.2)
Never married | Divorced/separated | Widowed wave 1, Married wave 2	0.5	42.4	(38.6, 46.2)

Quality of life shows a small improvement for those who were married at wave 1, but widowed at wave 2. While initially surprising, this may reflect the fact that participants who were widowed during the follow-up period had a lower quality of life at wave 1 because their spouse/partner was in poor health prior to their death (Figure 6.3).

1. A small number of transitions (n=30) are omitted due to small numbers (e.g. those who went from divorced/separated in wave 1 to widowed in wave 2).

Figure 6.3: Mean change in CASP-19 quality of life score by transitions in marital status



Note. N = 4393; Missing obs = 30; Error bars correspond to 95% confidence intervals

6.5 Quality of life and employment status

Retirement from employment is considered an important milestone as it marks a transition in one's daily routines, responsibilities, social relationships and income (16). Indeed researchers continue to debate whether retirement is associated with increases in levels of subjective wellbeing and quality of life or whether this major life transition contributes to psychological distress. TILDA participants were asked to describe their employment status during the course of the survey which allows for an investigation of how quality of life varies by transitions in employment status between wave 1 and wave 2. The major transitions in employment status are characterised using the classification shown in Table 6.5.[2] It describes the percentage of participants falling within each category and the mean score on the quality of life measure for each group. For example, 31.2% of participants were employed at both waves, while 3.9% of participants who were unemployed at wave 1 had gained employment at wave 2.

2. Some transitions have been combined due to small numbers (e.g., those who transitioned from being unemployed (wave 1) to permanently sick (wave 2) are included in the 'permanently sick (wave 2) category').

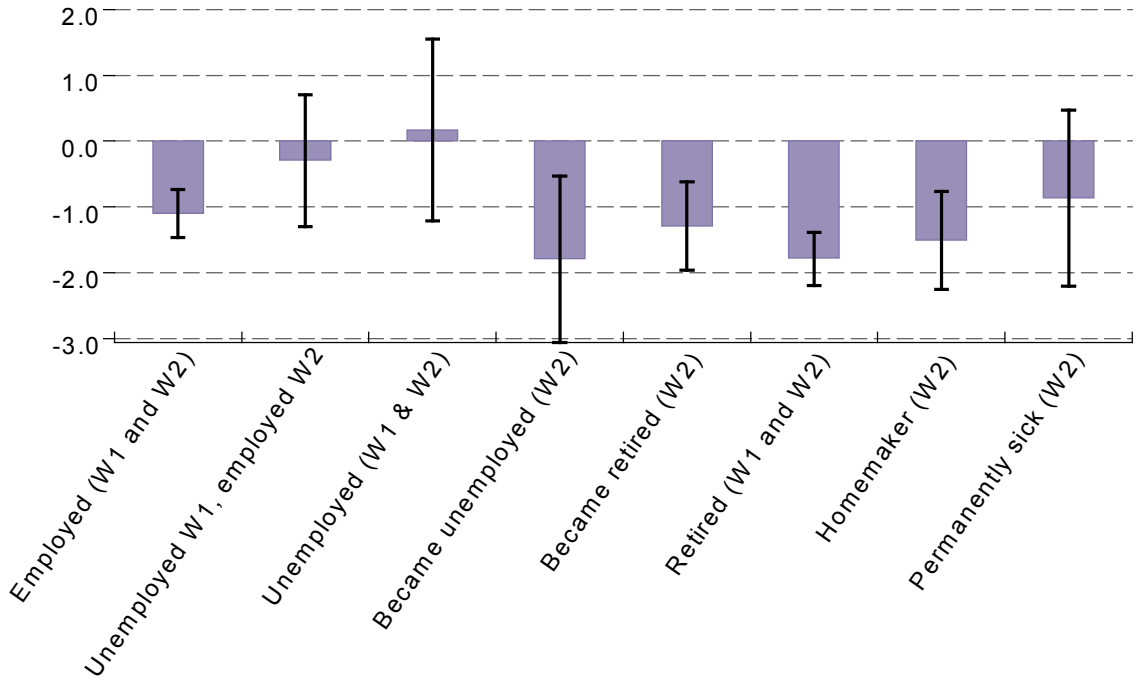
Table 6.5: Mean CASP-19 quality of life score at wave 2 by transitions in employment status

	% of the sample	Mean	(95% CI)
Employed (wave 1 and wave 2)	31.2	44.3	(43.9, 44.7)
Unemployed wave 1, Employed wave 2	3.9	42.2	(40.4, 43.5)
Unemployed (wave 1 and wave 2)	2.5	41.7	(40.1, 43.2)
Became unemployed (wave 2)	2.0	40.7	(38.8, 42.7)
Newly retired (wave 2)	11.0	43.1	(42.2, 44.1)
Retired (wave 1 and wave 2)	31.8	42.9	(42.4, 43.4)
Homemaker (wave 2)	13.6	41.7	(40.8, 42.6)
Permanently sick (wave 2)	4.1	35.5	(33.9, 37.0)

Participants who are employed at both waves have the highest quality of life score (mean score = 44.3), although it should be acknowledged that this may simply reflect the fact that those who are currently employed are younger and tend to be in better physical health. Participants who are unemployed in both waves have lower scores on the quality of life measure compared with those who are employed at both waves. Finally, those who were permanently sick have the lowest quality of life score of all the groups considered (mean score = 35.5).

Figure 6.4 shows the mean change in the overall CASP-19 quality of life score by transitions in employment status. Participants who have gained employment between waves recorded only a small decline in quality of life (-0.3 CASP units), while those who became unemployed are characterised by steeper declines in quality of life (-1.8 CASP units). Similarly, quality of life declines at a faster rate (-1.7 CASP) for those who are retired at both waves compared with those who are employed at both waves (-1.1 CASP units), but this is likely attributable to the fact that retirees are older and tend to be in worse health.

Figure 6.4: Mean change in the CASP-19 quality of life score by transitions in employment status



Note. N = 4423; Missing obs = 0; Error bars correspond to 95% confidence intervals

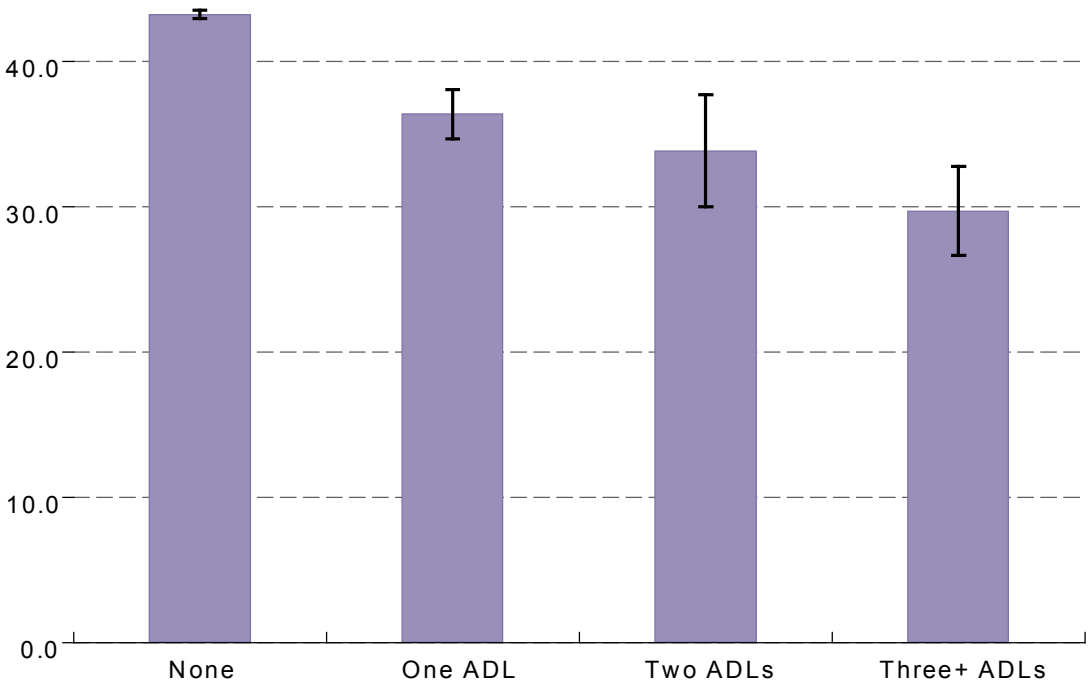
6.6 Quality of life and disability

Disability is common in later life and affects up to 20% of the US population aged 65 years and over (17). Disability is usually defined in terms of restrictions in the ability to perform activities of daily living (ADL), or the inability to function independently in terms of basic ADLs or instrumental ADLs (IADLs) (18). A study from the ELSA team found that the effect of having a longstanding illness on quality of life was compounded if it co-existed with a functional limitation (19). Furthermore, disability is one of the strongest predictors of nursing home admissions (20). In this section, we focus on the relationship between quality of life and disability, defined as having at least one ADL limitation.

Participants completed a 6-item checklist to establish whether they experience any limitations in activities of daily living (ADLs). This includes difficulties with: (1) dressing; (2) walking across a room; (3) bathing or showering; (4) eating, such as cutting up food (5); getting in or out of bed; and (6) using the toilet, including getting up or down. Overall, 4.2% of those who have a valid CASP-19 score report an ADL limitation at wave 2, with 2.6% having one ADL, 0.7% having two ADLs, and 1% having three or more ADLs. There is a strong inverse relationship between the number of reported ADLs and participants' self-

rated quality of life (see Figure 6.5). Those who are free of disability have a significantly higher quality of life score (mean score = 43.2) compared with those who report one or more ADLs. Moreover, quality of life continues to deteriorate as the number of experienced ADLs increases with the mean score on the CASP-19 declining from 36.4 for those with one ADL, through 33.9 for those with two ADLs, and 29.7 among those with three or more ADLs.

Figure 6.5: Mean CASP-19 quality of life score at wave 2 by the number of ADLs



Note. N = 4423; Missing obs = 0; Error bars correspond to 95% confidence intervals

To examine how transitions in disability status over time affect quality of life, information provided by participants at each wave is used to classify participants into four groups based on their functional status:

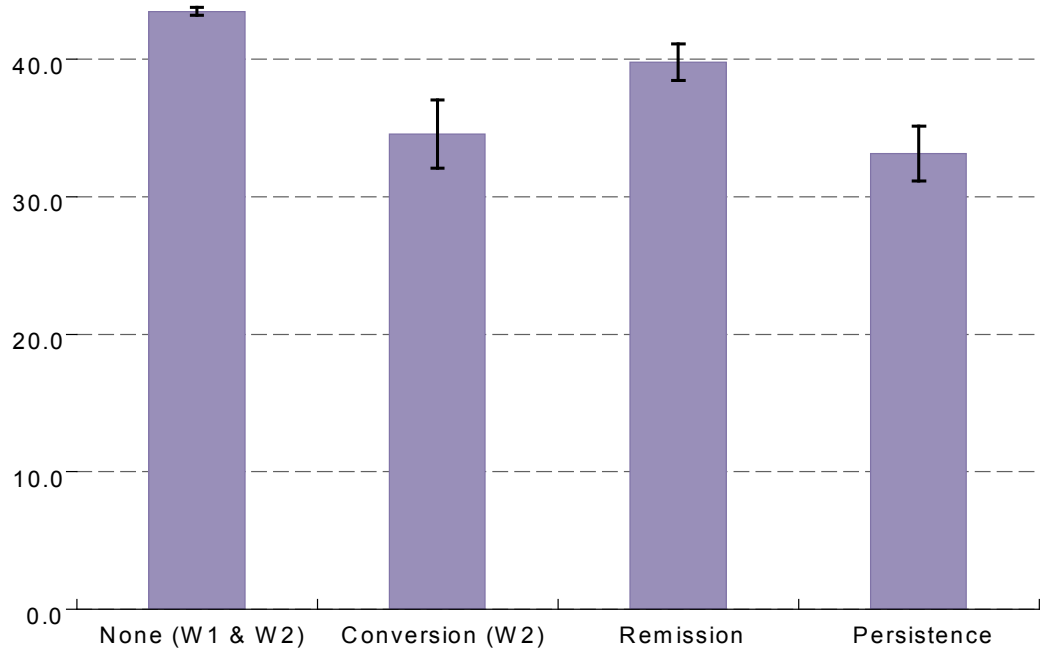
- None – Free of limiting disability at wave 1 and wave 2;
- Conversion – Free of limiting disability at wave 1 but reporting impairment at wave 2;
- Remission – Limiting disability at wave 1 but no impairment at wave 2;
- Persistence – Limiting disability at both wave 1 and wave 2.

The vast majority of participants (90.9%) who have a valid score on the CASP-19 measure are free of disability at both waves. A further 2.2% are accounted for by those who were

free of disability at wave 1 but report an ADL limitation at wave 2, while 4.9% experience remission of their disability across waves. About 2.0% experience persistence of disability between waves. Participants who are free of disability at both waves have the highest quality of life ratings at wave 2 (see Figure 6.6) with a mean score on the CASP-19 scale that is almost 10 CASP units higher than the score for those who report the presence of activity limitations at both waves (mean score = 43.4 vs 33.1). Quality of life is lower for those who were free of disability at wave 1, but are affected by an activity limitation at wave 2 (mean score =34.5), relative to those who are free of disability at both waves. Conversely, participants who indicate that their activity limitation had resolved from wave 1 to wave 2 (remission) have a higher quality of life (mean score = 39.8) than those for whom disability persists, though they continue to score significantly lower than those who are free of disability at both waves.

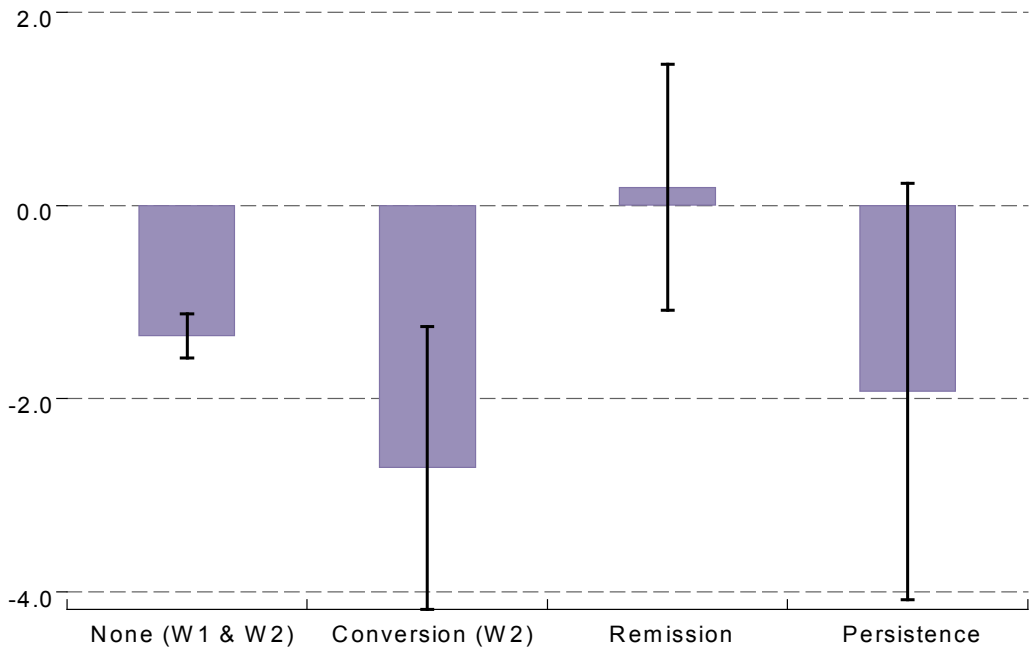
Similar patterns are observed using the change score as an index of within-person change in quality of life over time. Figure 6.7 shows that participants who are free of disability at both waves experience a reduction of 1.3 CASP units in their quality of life. Those who develop an activity limitation between waves experience the greatest diminution in their quality of life (-2.7 CASP units) over time. By contrast, participants whose disability limitation resolves between waves do not experience a significant change in their quality of life between waves.

Figure 6.6: Mean CASP-19 quality of life score at wave 2 by transitions in ADL status



Note. N = 4423; Missing obs = 0; Error bars correspond to 95% confidence intervals

Figure 6.7: Mean change in CASP-19 quality of life score by transitions in ADL status



Note. N = 4423; Missing obs = 0; Error bars correspond to 95% confidence intervals

6.7 Quality of life and depression

Studies have shown that depressive illness is associated with lower self-rated quality of life (21, 22). In TILDA, depression is measured using the 20-item Centre for Epidemiological Studies (CES-D) depression scale, which is a widely used self-report screening instrument for depression in the general population (23). A total score is calculated by summing responses across the 20 items (range 0-60), with a score of 16 or more implying a clinically significant level of psychological distress. A similar classification to that described at section 6.5 is used to characterise transitions in depression status across waves:

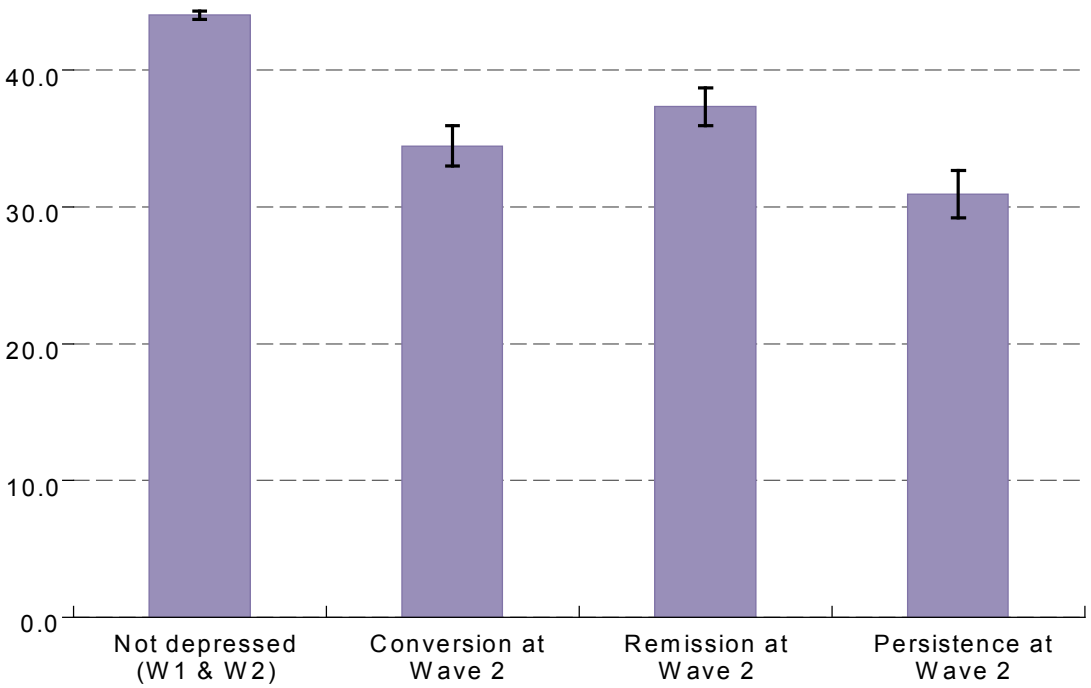
- Not depressed (wave 1 or wave 2);
- Conversion – Not depressed (wave 1), depressed (wave 2);
- Remission – Depressed (wave 1), not depressed (wave 2);
- Persistence – Depressed (wave 1 and wave 2).

Overall, 88.1% of TILDA participants may be classified as not depressed at both waves, while 3.3% are depressed in both waves. There is a remission in depressive symptoms for 4.8% of the older population while 3.8% experience a clinically significant increase in their symptoms between waves. Participants who are free of depression at both waves

report significantly higher quality of life scores at wave 2 (mean score = 44.0) compared with the other groups (see Figure 6.8). Those who develop depression between waves have a significantly lower quality of life score (mean score = 34.4) compared with those who are free of depression at both waves. By contrast, quality of life is higher for those who experience remission of depressive symptoms between waves (mean score = 37.3) compared with those who are depressed at both waves (mean score = 30.9).

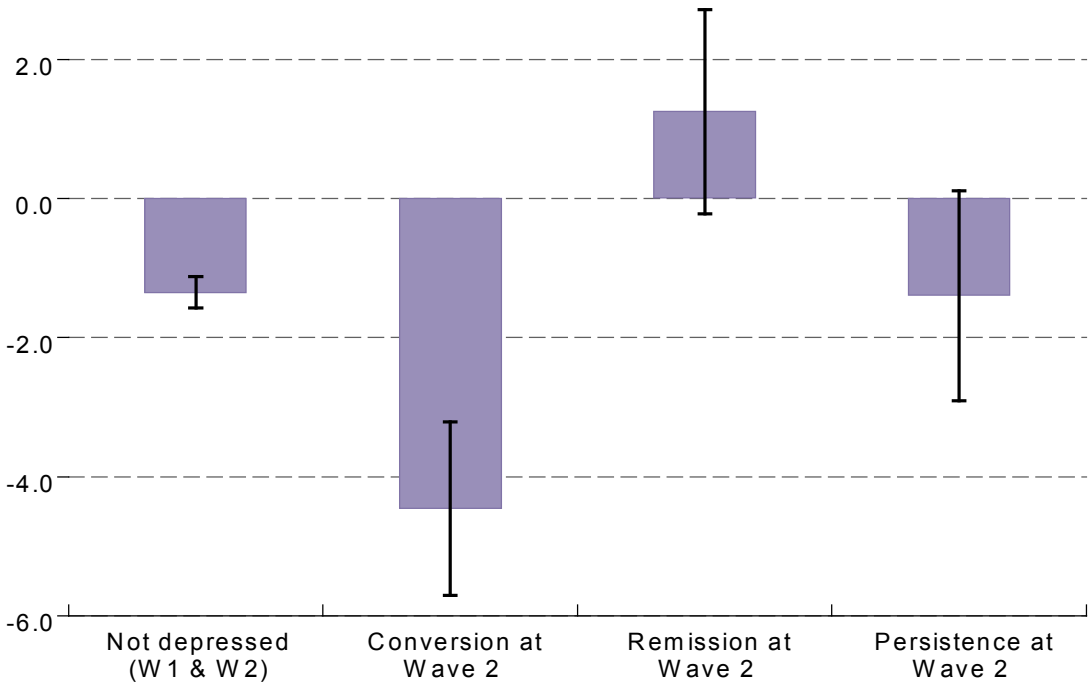
Figure 6.9 shows that those who develop depression between waves experience the greatest fall in quality of life over time with their mean score on the CASP-19 measure decreasing by -4.4 CASP units over the two-year follow-up interval. Respondents for whom depression persists experience a decline in quality of life that is of similar magnitude to those who are free of depressive illness at both time points (approximately 1.4 CASP units) (although it should be acknowledged that the former group are declining from a much lower wave 1 quality of life score). Those who experience remission of depressive symptoms between waves are characterised by gains in quality of life (+ 1.2 CASP units).

Figure 6.8: Mean CASP-19 quality of life score at wave 2 by transitions in depression status



Note. N = 4318; Missing obs = 105; Error bars correspond to 95% confidence intervals

Figure 6.9: Mean change in CASP-19 quality of life score by transitions in depression status



Note. N = 4318; Missing obs = 105; Error bars correspond to 95% confidence intervals

6.8 Quality of life and social engagement

Social engagement, social support and trusting relationships have all been associated with improved quality of life in older adults (24). TILDA collects a wide range of information from participants relating to social participation and interaction. This information is used to assess types of relationships and levels of social connection, including participation in various types of social and leisure activities, church-going and volunteering. This section documents the relationships between such social structures and quality of life in older Irish adults.

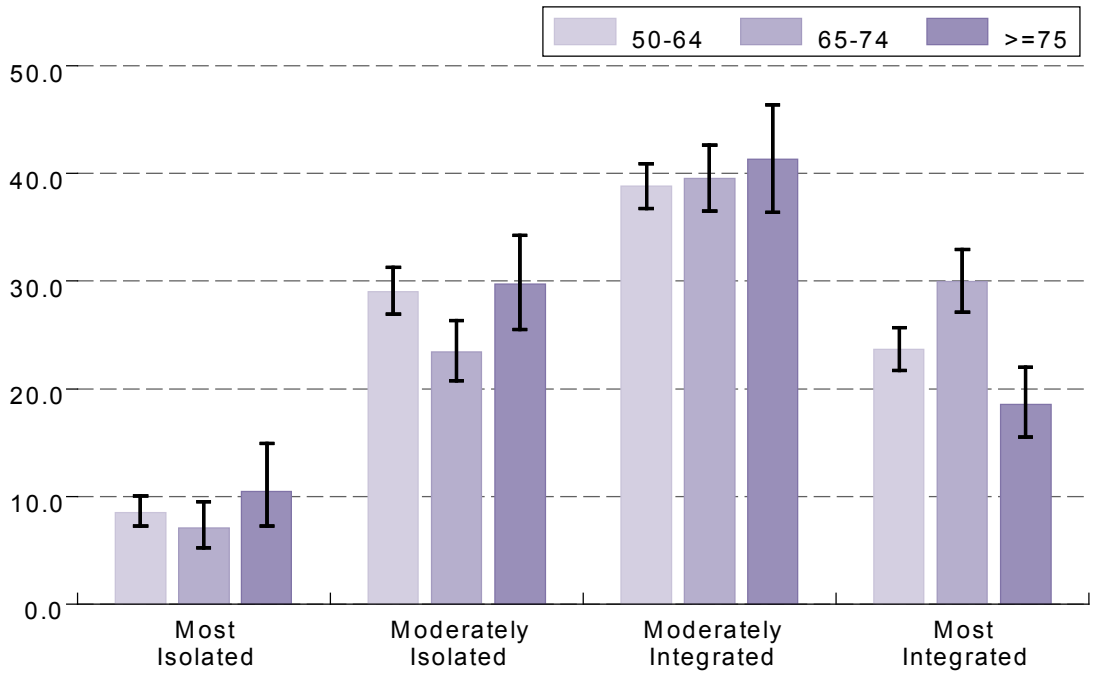
6.8.1 Quality of life and social networks

Findings from ELSA indicate that having strong social networks is consistent with a higher quality of life score (25). The strength of social networks among TILDA participants is measured using the Berkman-Syme Social Network Index (SNI) (26). This index is scored on a 0-4 composite scale quantifying four types of social connection: (1) marital status; (2) close ties with children, relatives and friends; (3) membership of a church group, and (4) membership of voluntary organisations. A score of 0-1 identifies a participant as 'most

isolated', with a score of 4 indicating 'most integrated'. Results from wave 1 of TILDA revealed that 26% of men and 23% of women over the age of 50 were classified as 'most integrated' using the Berkman-Syme SNI classification (13). The corresponding figures for 'most isolated' were 6% and 7% respectively. These figures only changed slightly in wave 2, with 27% of men and 22% of women classified as 'most integrated' and 8% of men and 9% of women classified as 'most isolated'.

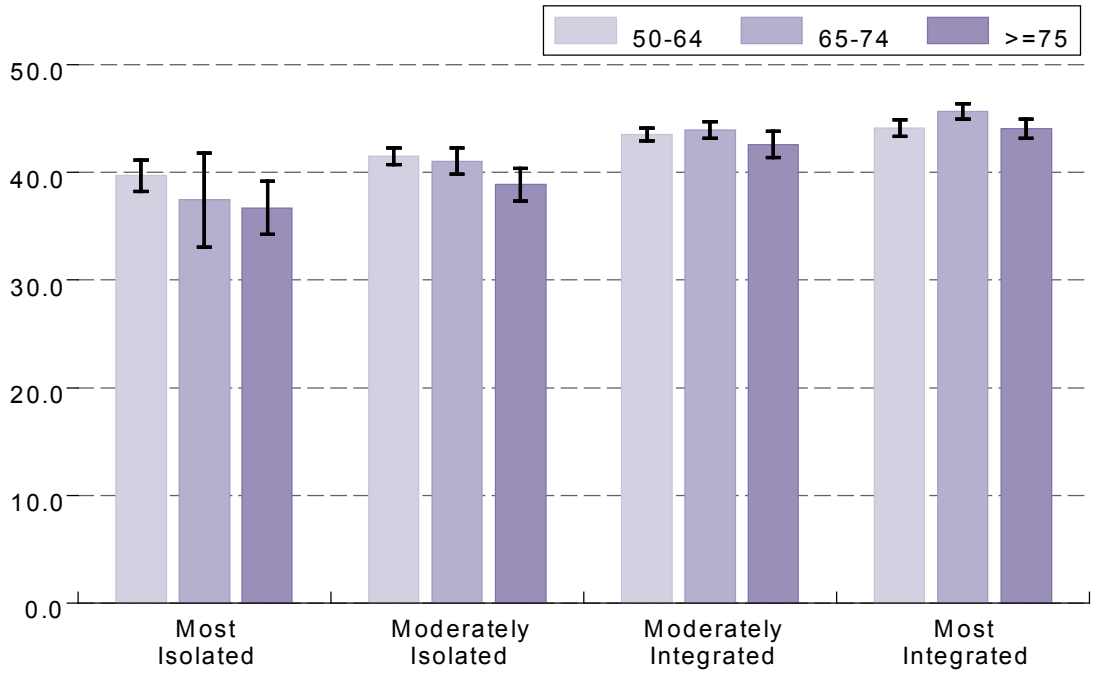
Participants aged 65-74 have the highest proportion of 'most integrated' (30%) compared to 24% in the younger age group and 19% in the older age group (see Figure 6.10). This is notable given that this age group may have transitioned into retirement more recently. It is possible that this allows for more time and opportunity to develop and interact with social networks. By contrast, smaller social networks in the over 75s may be linked to poorer health and disability. Figure 6.11 indicates mean CASP-19 score in each Social Network Index category by age. In participants over the age of 65, quality of life is highest among those who are 'most integrated' (mean score = approximately 45.0) and lowest among those 'mostly isolated' (mean score = approximately 37.0). Change in Social Network Index values between waves is not related to changes in quality of life between waves.

Figure 6.10: Distribution of Berkman-Syme Social Network Index of social connection at wave 2 by age



Note. N = 4416; Missing obs = 7; Error bars correspond to 95% confidence intervals

Figure 6.11: Mean CASP-19 quality of life score at wave 2 by Berkman-Syme Social Network Index and age



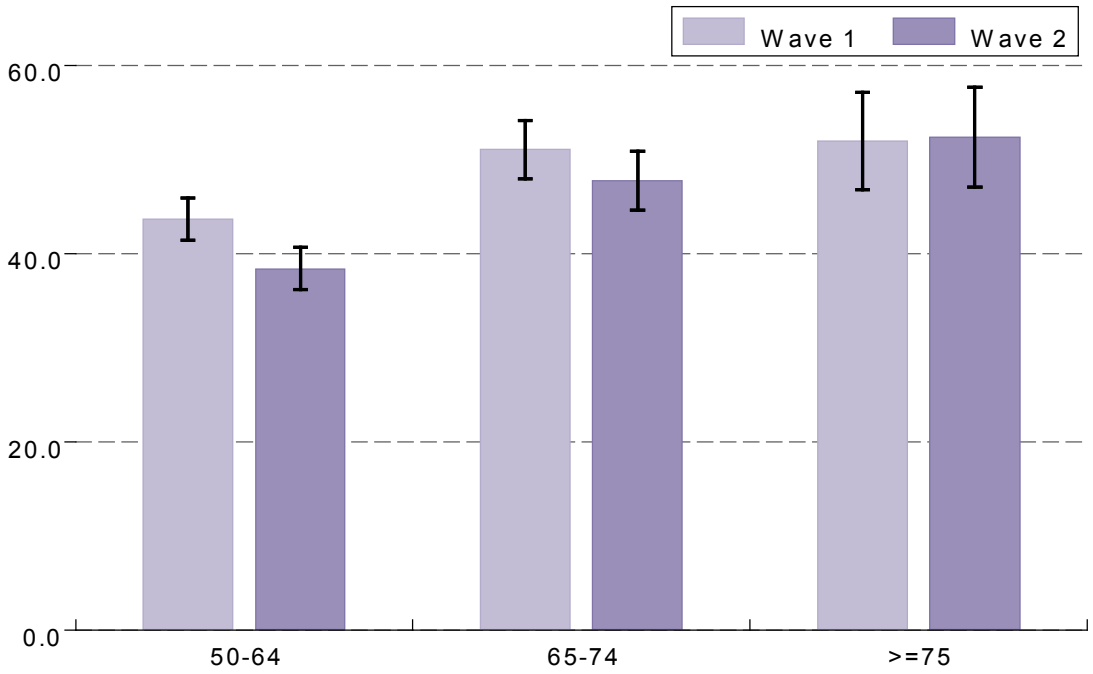
Note. N = 4416; Missing obs = 7; Error bars correspond to 95% confidence intervals

6.8.2 Quality of life and social participation

Increased social participation in older age is associated with improved life expectancy, better self rated health and a higher quality of life (27, 28). TILDA measures frequency of participation in social activities and relationships in four domains: (1) intimate social relationships (i.e., daily contact with family or friends); (2) formal organisational involvement; (3) active and social leisure activities; (4) passive and solitary leisure activities, adapted from House et al. (29).

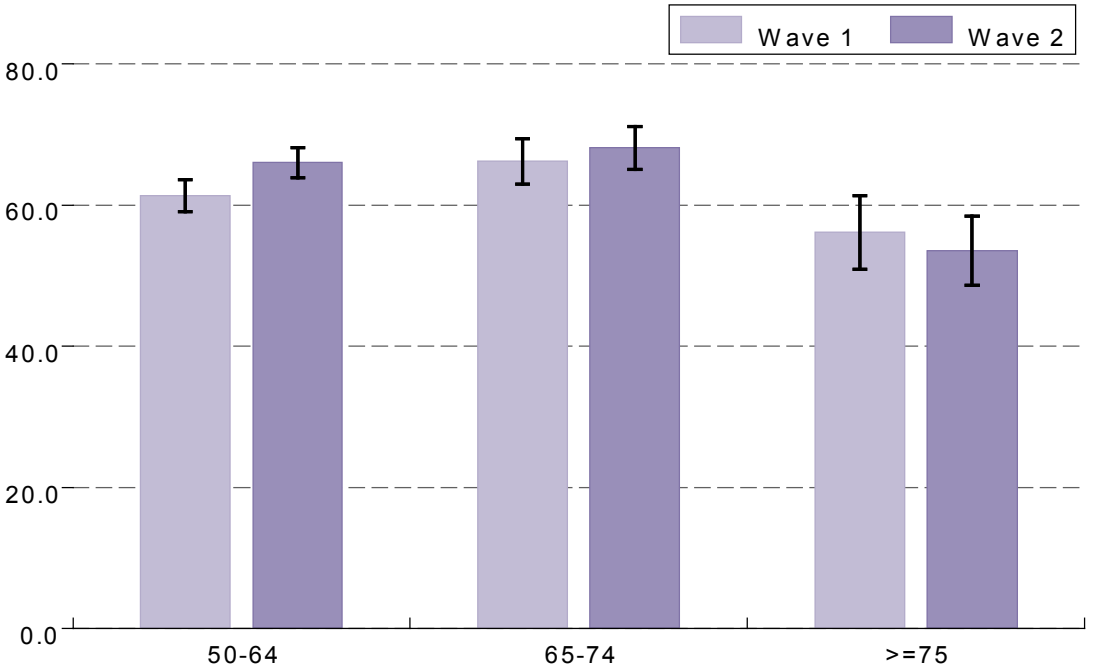
The proportion of older adults engaging in active and social leisure, and passive and solitary leisure, activities has remained relatively unchanged between waves at 87% and 99% respectively. Less than half of TILDA participants report engagement in intimate social relationships at wave 2 (43.9%), while the majority (64%) engage in formal organisational involvement outside of work. The proportion of 52-64 year olds participating in intimate social relationships has decreased from approximately 43% at wave 1 to 38% at wave 2 (see Figure 6.12), and remains lower than their older counterparts. However, the proportion of this age group engaged in formal organisational involvement outside of work has increased from 61.7% in wave 1 to 64.1% in wave 2 (see Figure 6.13).

Figure 6.12: Percentage engaging in intimate social relationships by age



Note. N = 4382; Missing obs = 41; Error bars correspond to 95% confidence intervals

Figure 6.13: Percentage engaging in formal organisational involvement outside of work 2 by age



Note. N = 4423; Missing obs = 0; Error bars correspond to 95% confidence intervals

Quality of life is significantly higher for those who engage in social relationships compared with those who do not. The largest discrepancy is seen in 'active and social leisure', where there is a mean difference of 5.8 CASP units between those who report engaging in the activities and those who do not (see Table 6.6).

Table 6.6: Mean CASP-19 quality of life score at wave 2 by social participation

	Participation			
	Yes		No	
	Mean	(95% CI)	Mean	(95% CI)
Intimate social relationships	43.3	(42.8, 43.8)	42.0	(41.6, 42.4)
Formal activity outside work	44.0	(43.6, 44.3)	40.1	(39.4, 40.6)
Active and social leisure	43.3	(43.0, 43.6)	37.5	(36.5, 38.5)
Passive and solitary leisure	42.6	(42.2, 42.9)	37.7	(33.5, 41.9)

To examine whether changes in social relationships and participation between waves influences self-reported quality of life, TILDA participants were categorised into one of four groups as shown below:

- Reporting no relationships/activities in wave 1 and wave 2;
- Reporting relationships/activities in wave 1 only;
- Reporting relationships/activities in wave 2 only;
- Reporting relationships/activities in wave 1 and wave 2.

Table 6.7 shows that the largest proportion of transitions is evident in 'intimate and social relationships' where just 31% of the population indicate that they have such relationships at both waves. Very little change is noted in 'active and social leisure' or 'passive and solitary leisure' with 82% and 99% respectively participating in these activities at both waves.

With the exception of 'passive and solitary leisure', mean quality of life score is lowest in the groups reporting no participation in both waves compared to those indicating participation at wave 2 (see Table 6.8).

Table 6.7: Changes in social participation between wave 1 and wave 2

	None at wave 1 or wave 2 % (n)	wave 1 only % (n)	wave 2 only % (n)	wave 1 & wave 2 % (n)	Total % (n)
Intimate social relationships	40 (1786)	16 (710)	13 (540)	31 (1346)	100 (4382)
Formal activity outside work	26 (952)	10 (372)	12 (492)	52 (2607)	100 (4423)
Active and social leisure	6 (169)	7 (221)	5 (191)	82 (3842)	100 (4423)
Passive and solitary leisure	0 (0)	0 (11)	0 (8)	99 (4404)	100 (4423)

Table 6.8: Mean CASP-19 quality of life score at wave 2 by transitions in social participation

	None at wave 1 or wave 2		wave 1 only		wave 2 only		wave 1 & wave 2	
	Mean	(95% CI)	Mean	(95% CI)	Mean	(95% CI)	Mean	(95% CI)
Intimate social relationships	41.7	(41.2, 42.2)	42.6	(41.9, 43.3)	43.7	(42.7, 44.6)	43.2	(42.6, 43.8)
Formal activity outside work	39.5	(38.7, 40.2)	41.7	(40.7, 42.7)	43.1	(42.2, 44.0)	44.2	(43.8, 44.5)
Active and social leisure	37.1	(35.6, 38.6)	37.8	(36.5, 39.2)	40.0	(38.3, 41.7)	43.5	(43.2, 43.8)
Passive and solitary leisure*	-	-	37.7	(33.5, 41.9)	37.8	(32.7, 43.0)	42.6	(42.3, 42.9)

*** There were no cases that did not participate in passive or solitary leisure at either wave.**

Table 6.9: Mean change in CASP-19 quality of life score by transitions in social participation

	None at wave 1 or wave 2		wave 1 only		wave 2 only		wave 1 & wave 2	
	Mean	(95% CI)	Mean	(95% CI)	Mean	(95% CI)	Mean	(95% CI)
Formal activity outside work	-1.8	(-2.3, -1.2)	-1.4	(-2.3, -0.5)	-0.8	(-1.5, 0.1)	-1.2	(-1.5, -0.9)
Active and social leisure	-1.7	(-3.3, -0.1)	-2.7	(-3.8, -1.7)	0.2	(-1.4, 1.0)	-1.2	(-1.5, -1.0)
Passive and solitary leisure*	N/A	N/A	-4.2	(-11.0, 2.6)	-2.6	(-0.5, 5.8)	-1.3	(-1.5, -1.1)

*** There were no cases that did not participate in passive or solitary leisure at either wave.**

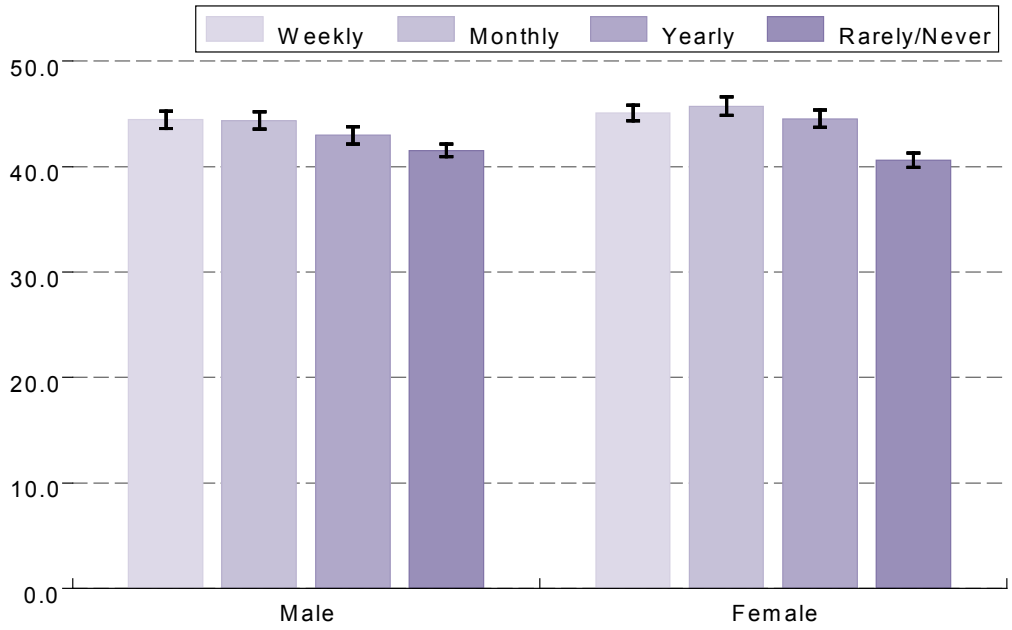
Across all domains of social relationships, those who increased their level of participation between waves experienced a smaller decline in quality of life compared with the other groups (see Table 6.9). This is most notable for participation in the 'active and social leisure' domain, where those indicating new participation at wave 2 had a mean change of 0.2 CASP units compared to -2.7 CASP units for those who ceased participation in this domain between waves.

6.8.3 Volunteering

In wave 1, 58% of the over 50s reported never volunteering, with 15% volunteering once a week, 11% once a month and 16% once a year. The frequency of volunteering has increased slightly between waves; 16% of the older population now volunteer weekly, 12% monthly and 18% yearly, with 54% never volunteering. In women and men, those who never volunteer have a lower quality of life than those volunteering at least once a year (see Figure 6.14).

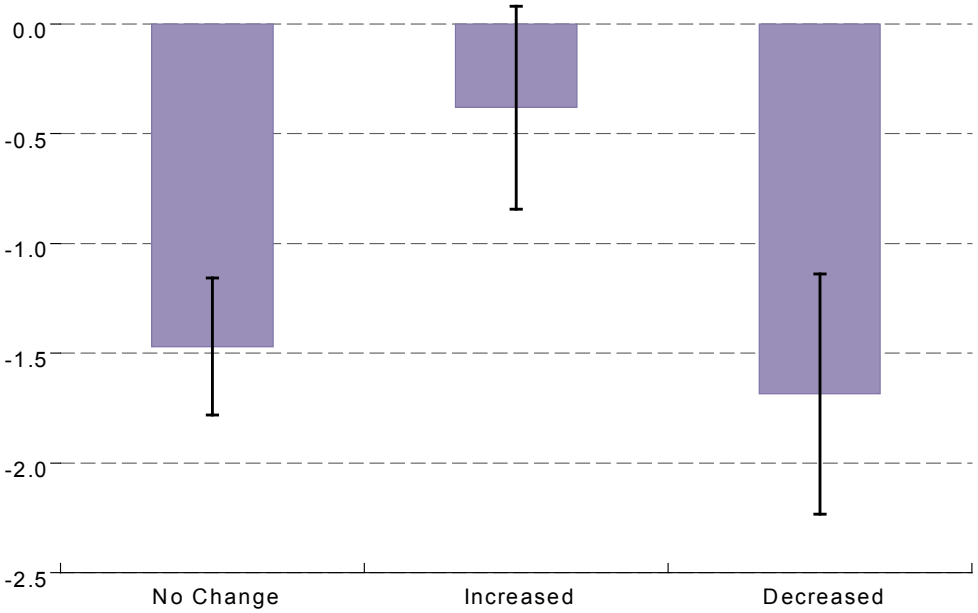
For participants who increased their frequency of volunteering between waves, there was no significant change in quality of life score. Conversely, mean CASP-19 quality of life score decreased by almost 1.5 and 1.7 CASP units respectively in those who did not change or who decreased their frequency of volunteering (see Figure 6.15).

Figure 6.14: Mean CASP-19 quality of life score by frequency of volunteering and sex



Note. N = 4358; Missing obs = 65; Error bars correspond to 95% confidence intervals

Figure 6.15: Mean change in CASP-19 quality of life score by transitions in volunteering frequency



Note. N = 4271; Missing obs = 152; Error bars correspond to 95% confidence intervals

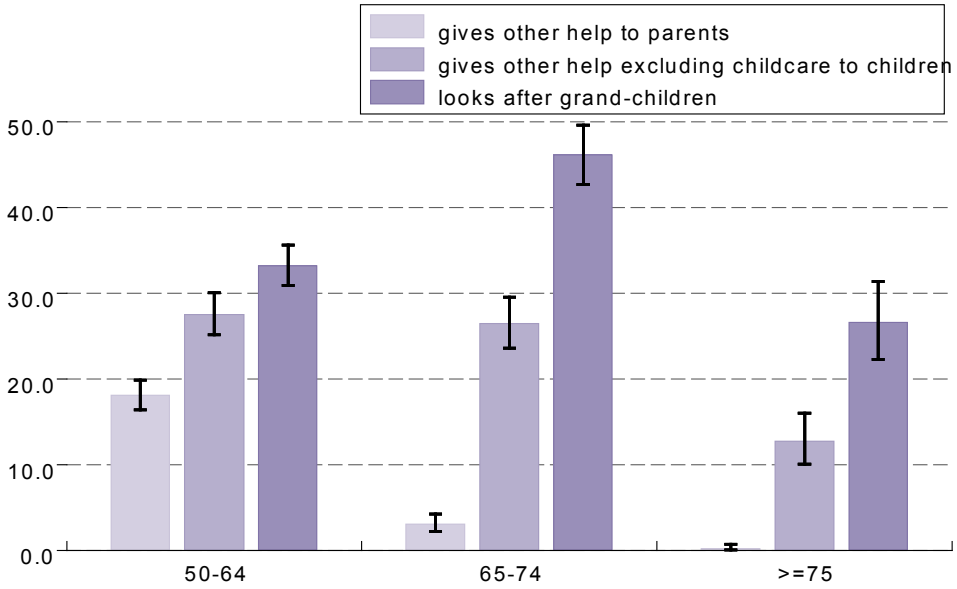
6.9 Quality of life and caring

Concern has been expressed about individuals who are caught in the middle between competing work, family and caring responsibilities (30). Previous research from ELSA suggests that providing care for parents and grandchildren is associated with higher quality of life (31). TILDA participants were asked about help given to children and parents, the type of help given, and the time allocated to these activities. Care given to parents includes help with basic personal activities such as dressing, eating and bathing, and help with other activities such as household chores, errands, shopping and transportation. Care given to adult children includes practical household help and taking care of grandchildren (see Appendix 6).

Overall, 10% of TILDA participants provided care to their parents in the past two years, 24% to their children and 35% looked after grandchildren. The type of help given varies by age, with 18% of participants aged 52-64 years providing time support to their parents, compared to 3% in those aged 65-74 years (see Figure 6.16). Just over a quarter of participants aged less than 75 cared for their children in the past two years, and this decreases to 13% among those aged 75 years or older. The percentage of participants providing care to grandchildren increases from 33% at 52-64 years of age to 46% at 65-74 years of age, but declines sharply thereafter decreasing to 27% among those aged 75

years or older.

Figure 6.16: Proportion providing care to parents and children at wave 2



Note. N = 4423; Missing obs = 0; Error bars correspond to 95% confidence intervals

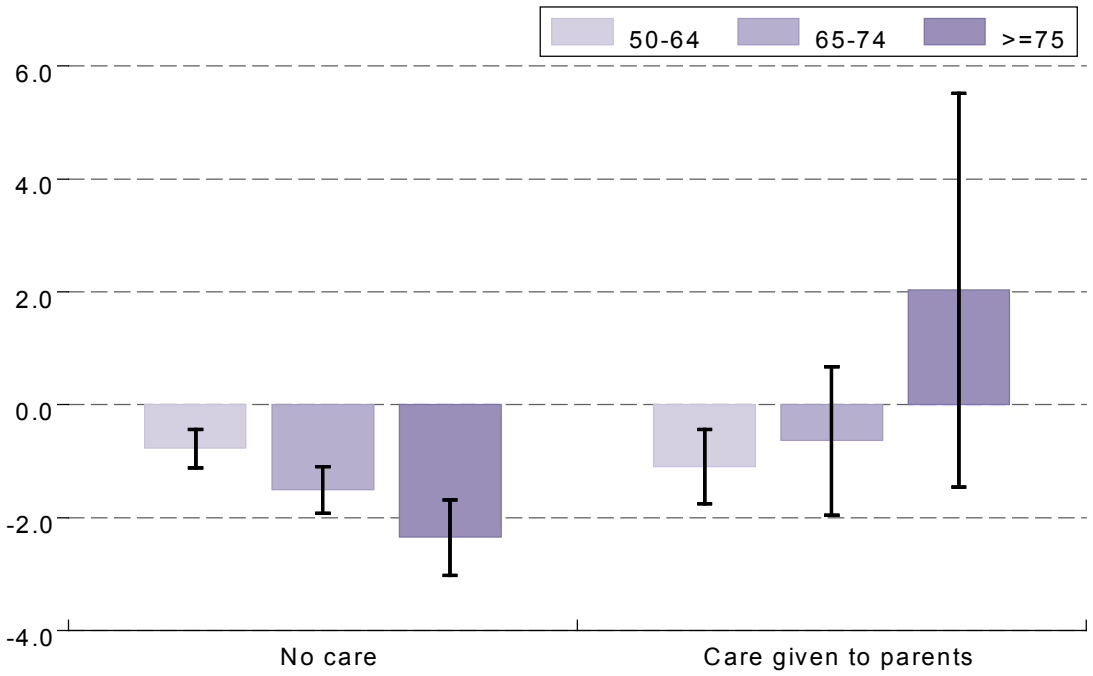
Research suggests that quality of life varies by caring status (31). Table 6.10 summarises the mean score on the CASP-19 quality of life measure at wave 2 for carers and non-carers. While there is no difference in quality of life between those who do and do not provide care to their parents overall, quality of life is higher in participants aged over 75 who provided care to their parents. Providing care to children is associated with a higher mean quality of life score (mean = 43.7 vs 42.2) and this difference is most marked among those aged 75 years and older. Similarly, analysis reveals that participants who are looking after grandchildren have a higher mean quality of life score (mean score = 43.5) compared with those who do not (mean score = 42.0).

Figures 6.17-6.19 show the mean change in quality of life score by age group between waves for those who (a) provide care to parents in wave 2 (b) provide care to their children in wave 2 and (c) provide care to grandchildren in wave 2. Figure 6.17 shows that caring for a parent is associated with an increase in quality of life between waves among those aged 75 years and older, although it should be acknowledged that these results are based on small numbers and statistically insignificant. Figures 6.18 and 6.19 show that there are no significant differences in the rate of decline in quality of life among those who cared for children and grandchildren compared with those who did not.

Table 6.10: Mean CASP-19 quality of life score at wave 2 by caring status

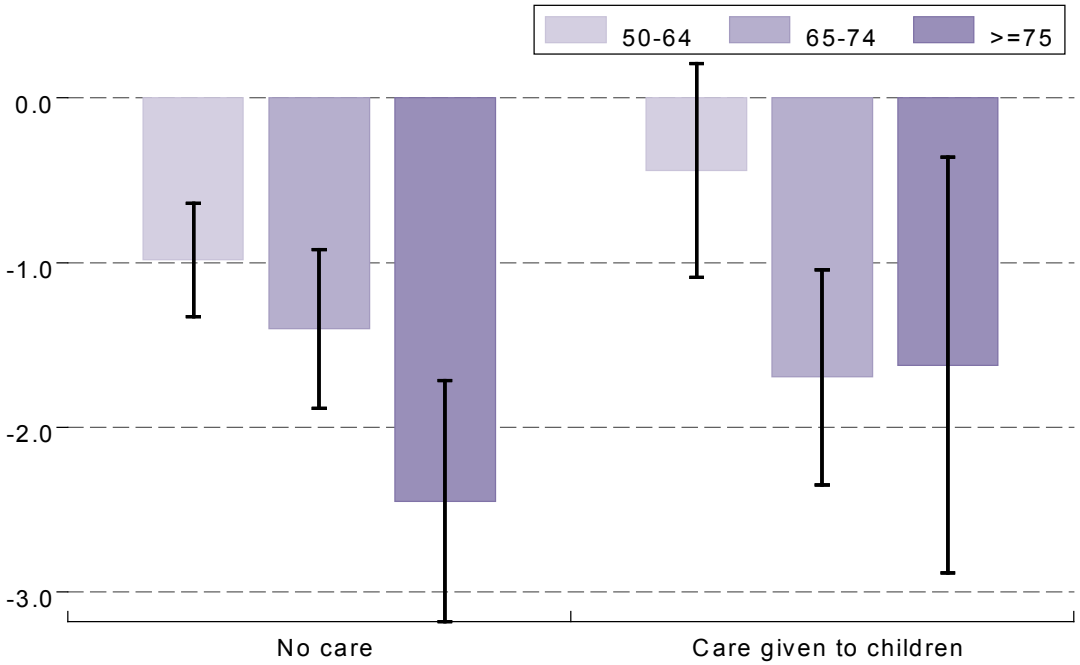
	52-64		65-74		75+		Total	
	Mean	(95% CI)	Mean	(95% CI)	Mean	(95% CI)	Mean	(95% CI)
Providing care to parents								
No care	42.8	(42.3,43.2)	43.2	(42.5,43.9)	41.1	(40.3,41.9)	42.5	(42.2,42.9)
Care given	42.7	(41.8,43.5)	45.0	(42.7,47.1)	48.1	(42.3,54.0)	42.9	(42.1,43.7)
Providing care to children								
No care	42.5	(42.0,43.0)	42.8	(42.0,43.6)	40.8	(39.9,41.6)	42.2	(41.8,42.6)
Care given	43.4	(42.6,44.1)	44.6	(43.6,45.6)	43.5	(40.9,46.0)	43.7	(43.2,44.3)
Looking after Grandchildren								
No care	42.6	(42.1,43.1)	42.3	(41.2,43.3)	40.5	(39.5,41.5)	42.0	(41.6,42.4)
Care given	43.1	(42.4,43.8)	44.4	(43.8,45.1)	42.8	(41.6,44.0)	43.5	(43.0,44.0)

Figure 6.17: Mean change in CASP-19 quality of life score by caring status at wave 2 (parents)



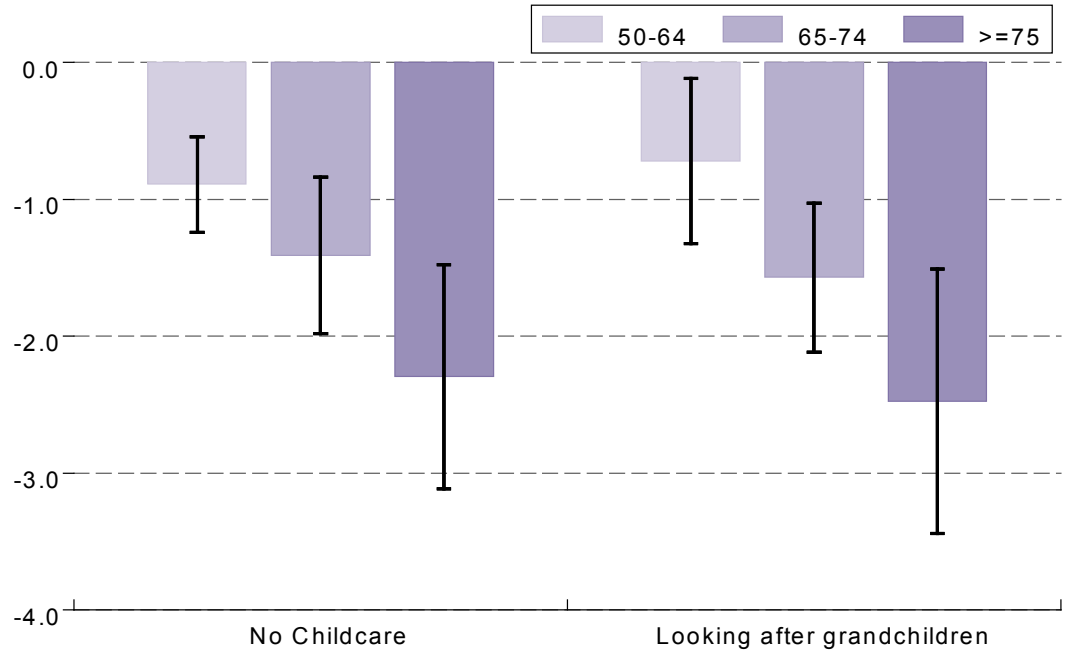
Note. N = 4423; Missing obs = 0; Error bars correspond to 95% confidence intervals

Figure 6.18: Mean change in CASP-19 quality of life score by caring status at wave 2 (children)



Note. N = 4423; Missing obs = 0; Error bars correspond to 95% confidence intervals

Figure 6.19: Mean change in CASP-19 quality of life score by caring status at wave 2 (grandchildren)



Note. N = 4423; Missing obs = 0; Error bars correspond to 95% confidence intervals

6.10 Conclusion

This chapter has examined change in quality of life among the over 50s in Ireland over a two-year period and explored some of the factors associated with change. Although quality of life declined for the entire sample, the rate of deterioration was greatest for those aged 75 years and over, whose rate of decline was almost 3 times greater compared with those aged 52-64 years. Consistent with previous research in this field, there is a strong relationship between demographic factors such as age and marital status and quality of life. Specifically, participants who are married at both waves rate their quality of life as higher compared with those who were never married, divorced/separated or widowed in both waves. Similarly, participants who are in employment in both waves report higher quality of life than those who are unemployed in both waves.

There is also strong evidence that quality of life is responsive to changes in health and disability over time. For example, participants who indicated that their depressive symptoms had remitted between waves experienced a significant improvement in quality of life. Similarly, participants who report that they are no longer troubled by disability (in terms of ADLs) experienced a large improvement in quality of life relative to the average for the sample. These findings suggest that initiatives designed to deter functional decline and disability through, for example, the use of assistive technologies (e.g, mobility scooters) will ensure that quality of life can be sustained into later life.

This chapter also explored the extent to which quality of life is responsive to changes in social participation and social relationships among the older population. Persons with strong social networks, who engage in various types of social relationships and who volunteer regularly have a higher quality of life score than less socially active participants. Those aged 75 years or older are less socially integrated than those aged 65-74. Interestingly, the young old (aged 52-64) are engaged in intimate social relationships to a much lesser extent than the over 65s. Moreover, there was some evidence to suggest that caring for children and grandchildren is associated with higher self-rated quality of life.

It should be acknowledged that the factors that influence quality of life do not operate in isolation but interact over time to determine one's trajectory. For example, Blane et al found that the impact of health on quality of life was mediated via its effect on functional limitation (32). It is entirely possible that there are spill-over effects whereby a high quality of life in one sphere positively influences satisfaction in other domains. Moreover, it could be argued that quality of life varies not only as a function of one's demographic and personal circumstances (e.g. health, socio-economic status, social participation) but also

involves a re-calibration of goals and aspirations to personal competencies and contextual constraints as people age (33). Future work employing multivariate statistical methods will allow for a more thorough analysis of the interplay between these different factors and an assessment of which of these impinge most heavily on quality of life within a longitudinal context.

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Appendix 6: Questions on caring for parents and children in TILDA

Care given to parents was assessed with the following questions:

Care given to parents in activities of daily living (ADL)
"In the last two years, because of health problems, did you help your parents/father/mother regularly with basic personal activities such as dressing, eating and bathing?"
"Roughly how many hours did you spend helping them/him/her in an average week?"
Care given to parents in instrumental activities of daily living (IADL)
"In the last two years, did you help your parents/father/mother regularly with other things such as household chores, errands, shopping, transportation etc?"
"Roughly how many hours did you spend helping them/him/her in an average week?"

Care given to adult children was assessed with the following questions:

Non-financial help to children[3]
"In the last 2 years, excluding childcare, have you spent at least 1 hour a week helping your adult children and/or grandchildren with things like: 1. Practical household help: help with home repairs, gardening, transportation, shopping, household chores 2. Help with paperwork, such as filling out forms, settling financial or legal matters"
"About how many hours per month on average did you provide such help to your children?"
Taking care of grandchildren:
"In the last two years, have you spent at least 1 hour a week taking care of grandchildren or great-grandchildren (who live outside your own household)?"
"About how many hours on average per month did you spend taking care of your grandchildren or great-grandchildren (who live outside your own household)?"

3. This refers only to help provided to children outside the household i.e. help provided to a co-resident child was excluded.