# Measuring Elder Abuse in New Zealand: Findings from the New Zealand Longitudinal Study of Ageing (NZLSA)

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## ABSTRACT

**Objectives:** There have been no previous studies measuring the prevalence of elder abuse in New Zealand. The aim of this study was to provide an evidence base of the prevalence of elder abuse, some of the populations most affected and the observed impacts of it.
**Methods:** The second wave of the New Zealand Longitudinal Study of Ageing (NZLSA) in 2012 had a national random sample of 2,987 older New Zealanders aged aged between 52 and 86 years, 1,699 of whom were 65 years and older. The Vulnerability to Abuse Screening Scale (VASS) which was developed for the Australian Longitudinal Study of Women's Health as a self-report screening scale for elder abuse was applied. Four sub-scales: vulnerability; dependence; dejection; and coercion, each containing 3 questions, enabled the identification of different types of elder abuse. The responses also enabled the calculation of an evidence based measure of prevalence and a base to apply future projections from. The responses were assessed for associations with gender, marital status and ethnicity and then further tested for statistical associations with a range of health and wellbeing measures, including CASP-12, WHOQoL-8, SF-12 Physical and Mental Health components, CES-D Screening Test for Depression and the De Jong Gierveld Loneliness Scale
**Findings:** The study demonstrated that elder abuse, as measured by VASS, was prevalent for at least 1 in 10 participants aged 65 years and over on each of the four sub-scales. Items concerning psychological abuse were more frequent than those associated with coercion and physical abuse. Women experienced significantly more abuse than men on three subscales, but surprisingly men were significantly more coerced than women. Māori experienced significantly more elder abuse when compared with non-Māori on all four subscales. Divorced, separated and widowed older people experienced a greater level of dejection with sad and lonely feelings, whereas partnered people showed lower levels. Consistent statistical correlations were found between elder abuse and lower levels of health and wellbeing, and higher levels of depression and loneliness. Regression analysis identified the variables most strongly associated with each elder abuse component. Loneliness was the only one very closely associated with all four. An exponential increase in elder abuse was identified using population projection data if nothing is done to reduce it. A 40 percent increase in the decade to 2023 and a 32 percent increase from that enlarged base from 2023 to 2033 was projected.
**Conclusion:** Elder abuse is pervasive in New Zealand, even though the vast majority of elderly people don't experience it. Furthermore it further marginalises people who are already marginalised. The damage to people of elder abuse is consistently negative and costly to health and welfare services as a consequence.

**Key words:** elder abuse, prevalence, wellbeing, health, depression, loneliness

This paper was commissioned by the Office for Senior Citizens within the Ministry of Social Development.

As the older population has been growing at a faster rate than the rest of the population in practically all countries, there has become a growing awareness of the vulnerability of an increasing number of elderly people and the abuse some of them experience. Both the United Nations and the World Health Organisation define elder abuse as, *"a single, or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person"*[1]. They note that such abuse can take physical, psychological or emotional, sexual and financial forms and that it can also be the result of intentional or unintentional neglect.

As the ageing demographic shift gathers momentum official bodies, human rights groups, public health groups and community organisations have encouraged awareness, understanding and means to combat elder abuse. The United Nations General Assembly, in its resolution 66/127[2], has gone so far as to designate June 15 as World Elder Abuse Awareness Day.

However, elder abuse is often a hidden phenomenon and the victims are frequently afraid to acknowledge it in surveys. Furthermore the definition, by its nature, can't be tight and easily measured or assessed. This poses a problem for research and policy responses because definition in research terms, identification and measurement lack the clarity of most other social phenomena.

*Prevalence*

Research, internationally, indicates that elder abuse exists across different cultural contexts, although prevalence rates vary considerably in studies and countries (Cooper et.al 2006, Cooper, Selwood, & Livingston, 2008 and Sooryanarayana, Choo, & Hairi, 2013). The field has yet to develop agreed definitions of different types of abuse and methodological differences may contribute to the variations found in results. Differing measuring tools and age ranges probably also add to the variation.

Cooper et. al. (2008), in a systematic review of forty nine elder abuse studies, noted that the prevalence of abuse reported by the general population studies ranged from 3.2 to 27.5 percent. Over 6 percent reported abuse during the last month and 5 percent of couples reported physical violence. A quarter of older people dependent on carers reported significant psychological abuse, while a fifth reported neglect. In a review of twenty six studies Sooryanarayana et. al. (2013) noted the lowest reported prevalence rate of abuse in the community was 1.1% in the United States (Fulmer et al., 2000) while the highest rates were found in Spain with suspicion of abuse[3] at 44.6% (Perez-Carceles et al., 2009). However, other studies in both countries provided different results with Acierno et. al.(2010) in the US reporting a prevalence rate of 11.4 percent and Garre-Olmo et al (2009) reporting 29.3 percent in Spain.

Using the database of the Australian Longitudinal Study on Women's Health, Schofield, Powers and Loxton (2013) studied the mortality and disability outcomes twelve years on from their base data in 1996 with a cohort of 82 to 87 year olds in 2008. They had

[1] http://www.un.org/en/events/elderabuse/background.shtml
http://www.who.int/ageing/projects/elder_abuse/en/

[2] http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/66/127

[3] Suspicion of abuse was calculated as at least one affirmative reply to the questions of the questionnaire such as "Do you frequently feel that you are a nuisance?" (6.5%), "Are you afraid of anyone at home?" (5.0%), and "Has anyone taken anything that was yours without asking?" (6.1%)

applied the Vulnerability to Abuse Screening Scale (VASS), which has the advantage of four different types of abuse, each with three self-report items, to the members of this cohort in 1996. The prevalence results showed: 7.5 percent reported vulnerability experiences (mainly verbal abuse or someone trying to hurt them); 6.4 percent experienced some form of coercion; 17.5 percent dependence (lack of privacy and trust) and 21.6 percent dejection (feelings of loneliness, unwanted and uncomfortable with a family member). They found that specific components of the scale were differently associated with rates of disability and mortality over the twelve year period, providing a clearer view of the effects of different types of abuse.

*Gender, Marital Status and Ethnicity*

Most studies show that women are significantly more likely to have experienced abuse than men, as found in a British random probability sample of 2,111 people aged 66 and older (Biggs et al. 2009). Chokkanathan and Lee (2005) found that women were significantly more likely to experience verbal and physical abuse and neglect when compared to men. Naughton et al. (2012) noted that women were more likely to experience interpersonal and financial abuse than men and Tobiasz-Adamczyk, Brzyski and Brzyska (2014) in a Polish study found that women identified themselves as the victims of violence and more often showed depressive symptoms, whereas men more often than women reported feeling social loneliness and low levels social support. Amstadter et al. (2011) and Acierno et. Al. (2010), on the other hand, found that gender differences were not significant in elder mistreatment.

The relationship between marital status and elder abuse is not as frequently recorded as associations with gender. However, marital status differences have been reported. Tobiasz-Adamczyk et. al. (2014) found that depressive symptoms and feelings of social and emotional loneliness were more common in divorced or widowed people, or those living alone, but were lowest among those who were married or living with a spouse/partner. Biggs et al. (2009) also found that marital status was a factor in the prevalence of mistreatment in the UK. They found that 9.4% of those separated or divorced experienced mistreatment compared to 1.4% of widowers. Those living alone were more likely to have experienced financial abuse than those living with others.

Studies that address ethnicity and elder abuse frequently, though not always, show that non-Whites are more likely to experience elder abuse. Amstadter et al. (2011), for example, found that non-White racial status and poor physical health were independently and significantly associated with increased likelihood of neglect among older people. Fulmer et al. (2005) found that elders who had experienced neglect were significantly more likely to self-identify as Hispanic or Latino than those without neglect. Lachs et al. (1997) found that race (non-white) was a risk factor for elder abuse along with age, poverty, functional disability, and cognitive impairment. Non-white participants were significantly more likely to have experienced reported elder abuse and neglect.

However, Acierno et al. (2010) applying multivariate analysis with a random sample of 5,777 older adults found that minority ethnicity predicted risk of abuse for potential neglect only, and that emotional, physical, financial, and sexual abuse were not predicted by ethnicity. Alexandra Hernandez-Tejada et al. (2013) in a study of elder mistreatment prevalence found that the only observable increase was for physical mistreatment among non-white participants, but that this increase was not significant when income, health status, and social support were controlled in multivariate analysis.

In contrast, low social support predicted all forms of mistreatment (emotional, physical, and sexual).

*Wellbeing and Health*

While few studies have directly associated wellbeing scales with elder abuse, quite a number have looked at the associations between wellbeing factors and elder abuse. Fulmer et al. (2005) found that cognitive status, functional status, depression, social support, childhood trauma, and personality were significant predictors of elder vulnerability. Elders who experienced neglect were more likely to be depressed and have less social support. Dong and Simon (2008) found that higher social support was associated with a lower risk of elder mistreatment - for every point higher on the social support scale there was a 6% lower risk. Cooper et al. (2006) found that participants with cognitive impairment, presence of depression, delusions, pressure ulcers, actively resisting care, less informal care, expressed conflict with family or friends were all more likely to screen positive for abuse.

Dong et al. (2008) found loneliness and lack of social support were associated with self-reported elder abuse among community dwelling elders. There were significant associations between elder abuse and reported lack of companionship in life, feeling left out of life, and feeling isolated. People with no or little available emotional support or little contact time with a trusted person predicted abuse and neglect. Furthermore feeling not satisfied with life, feeling bored in life, feeling helpless, and feelings worthlessness were associated with elder abuse and neglect. Amstadter et al. (2011) found that low social support and needing assistance with daily activities were most consistently correlated with all mistreatment types assessed (emotional, physical, sexual, neglect, and financial). Bivariate analysis identified older age, being female, non-white ethnicity, low income, poor health, low social support and use of social services contributed to an increased likelihood for unmet needs and consequently neglect. Buri et al (2008) found that prevalence of abuse among community dwelling elders in a random sample of elders in the Iowa Medicaid Waiver Program was high (20.9%) and that abuse was associated with low social provisions, insufficient income, being alone, and more emergency room visits.

Multiple studies have also demonstrated links between health outcomes and abuse among elderly populations. Schofield et al. (2013) found that vulnerability to abuse predicted mortality and disability. Coercion was found to predict mortality among older women, and dejection predicted risk of disability. In a cross-sectional study of 842 community dwelling women aged 60 and over, Fisher and Regan (2006) found that abused women were significantly more likely to report more health conditions than women who had not experienced abuse. Health conditions included bone or joint problems, digestive problems, depression or anxiety, chronic pain, and high blood pressure or heart problems. Psychological/emotional abuse had a negative impact on women's health outcomes. Lachs et al. (1998) in their study on elder mistreatment found at the end of a 13 year follow-up that elders who had experienced some mistreatment had poorer survival than those without identified incidence of mistreatment even when other factors were accounted for (demographic characteristics, chronic diseases, functional status, social networks, cognitive status, and depressive symptomatology).

*Depression and Loneliness*

Numerous studies have identified significant relationships between depression and elder abuse. Dong et al. (2008) found that depression was associated with elder abuse and

neglect among a sample of community dwelling elders in NanJing, China using a screening tool adapted to the Chinese context from VASS and from Hwalek-Sengstock Elder abuse Screening Test (H-S/EAST). In a later study with a small population sample of Chinese American elders, Dong et al. (2014) found that higher depressive symptomology (using the Geriatric Depression Scale) was associated with increased risk of elder mistreatment. Overall, there was a significant increased risk of elder mistreatment for every 1 point increase in depressive symptoms.

Dyer, Pavlik, Murphy, and Hyman, (2000) identified depression (screening positive on the Geriatric Depression Scale), as significantly associated with elder abuse and neglect after adjusting for age, sex, education, and income. Chokkanathan and Lee (2005) found with a random sample of community dwelling adults over 65 in Chennai, India that mistreated older adults had higher rates of depression and lower life satisfaction than those who were not mistreated. Although Lachs et. al. (1997) found that depression (CES-D scale) was not significantly associated with elder abuse cases reported to adult protective services, a bivariate analysis showed that 22% of those who were depressed also experienced abuse and/or neglect.

Loneliness is a further factor that has been associated with elder abuse. Dong et al. (2007) found that the risk of mistreatment was correlated with higher loneliness scores even when confounding factors were accounted for including age, sex, education, income, marital status, and depressive symptoms. Participants with higher loneliness scores were four times as likely to experience elder abuse. They also found that a feeling of lacking companionship and a feeling of sometimes being left out in life were positively associated with a risk of abuse for older people. Tobiasz-Adamczyk (2014) low psychological well-being was associated with being a victim of physical, psychological, and financial violence, and with feelings of neglect. Emotional and social loneliness, applying the De Jong Gierveld Loneliness Scale, were significantly associated with psychological violence and with feelings of neglect. Depressive symptoms were significantly associated with physical, psychological, and financial violence, as well as neglect. Luanaigh and Lawlor (2008) in their literature review of loneliness and health of older people, identified a strong association between depression and loneliness. They noted that loneliness can have a significant negative impact on physical outcomes for the elderly.

This current study aims to address these same issues of: elder abuse prevalence: the associations between gender, marital status and ethnicity with elder abuse; and the wellbeing, health depression and loneliness relationships with elder abuse. The database of a national random sample of older New Zealanders aged between 65 and 86 years within the New Zealand Longitudinal Study of Ageing (NZLSA) is used.

**Methods**

The New Zealand Longitudinal Study of Ageing (NZLSA)[4] began wave 1 with a national random sample of 3,317 New Zealanders aged between 50 and 84 years in 2010 and

[4] NZLSA is a collaboration between the School of Psychology, Massey University and the Family Centre Social Policy Research Unit. The research programme has been funded by the Foundation for Research, Science and Technology in New Zealand which has subsequently been absorbed into the Ministry for Business, Innovation and Employment. The Principal Investigators are Fiona Alpass & Christine Stephens (Massey University) and Charles Waldegrave & Peter King (Family Centre Social Policy Research Unit).

retained 2,987 participants, 1,699 of which were 65 years and older, for the second wave in 2012.

A comprehensive postal questionnaire containing scales and questions on general health, social support, care-giving roles, financial wellbeing, neighbourhood characteristics and demographic information was sent to all participants. Among the sets of questions pertinent to this paper, two wellbeing (quality of life) scales, a health scale with physical and mental health components, a depression, a loneliness and an elder abuse scale were used.

WHOQoL-8 is a World Health Organisation quality of life instrument that assesses subjective wellbeing. Eight questions inquire into participants' satisfaction with various aspects of their health, physical and social lives. A five point scale is used ranging from very satisfied to very dissatisfied.

CASP-12 is a quality of life measure of well-being developed for older people which spans four domains of control, autonomy, self-realisation and pleasure (hence CASP). Twelve questions inquire into the four domains using a four point scale ranging from often to never.

The SF-12 is a generic health status measure of health outcome in a wide variety of patient groups and social surveys. It was developed from the SF-36 to enhance response rates by reducing patient burden without decreasing reliability. The 12-item questionnaire has two components: a Physical Component Summary Score (PCS); and a Mental Health Component Summary Score (MCS).

The CES-D scale is a short self-report scale designed to measure depressive symptomatology in the general population. The 10 items of the scale are symptoms associated with depression which have been used in previously validated longer scales.

De Jong Gierveld Loneliness Scale is an indicator of social well-being that focusses on the feeling of missing an intimate relationship (emotional loneliness) or missing a wider social network (social loneliness). It has 11 items and is widely used in research on ageing.

The Vulnerability to Abuse Screening Scale (VASS) was developed for the Australian Longitudinal Study of Women's Health as a self-report screening scale for elder abuse. Four sub-scales, each containing 3 questions are used. The four sub-scales are vulnerability, dependence, dejection and coercion.

In this paper the results of NZLSA Wave II 2012 regarding elder abuse for those 65 years and over are presented. A summary and analysis of the responses to the VASS questionnaire focussing on both the component sub-scales and the individual items is given. The results record:

- the prevalence and types of abuse as measured by VASS from the sub-sample of NZLSA participants aged 65 years;
- the relationships between gender, marital status and ethnicity and the elder abuse data;
- the associations between the VASS responses and the wellbeing, health, depression and loneliness scales;

- projections of elder abuse prevalence in New Zealand over the next five decades, based on this data and using Statistics NZ Population Projections by Age.

**RESULTS**

*Prevalence*
The prevalence of elder abuse on each sub-scale and each item of the Screening Scale is set out in table 1. The vast majority of participants did not experience abuse as one would expect. However, a minimum of around one in ten plus did record some form of abuse.

The 50+ group were the total sample (n = 2,987) aged 50 years or more, while the 65+ group (n = 1,699) was a sub-sample of those 65 years or more. Interestingly the older sub-sample considered themselves to be less *vulnerable* and slightly less *coerced* than the total sample suggesting differing perceptions of the nature of abuse. However the experience of *dejection* and *dependence* for both groups was similar, with the older group considering themselves to be a little more dependent.

**Table 1. Components and Prevalence of Elder Abuse, NZLSA Wave II 2012**

| Elder Abuse Scales and Items | 50+ Prevalence % | 65+ Prevalence % |
|---|---|---|
| **Vulnerability** | **11.6** | **9.6** |
| **Are you afraid of anyone in your family?** | 2.5 | 2.0 |
| **Has anyone close to you tried to hurt you or harm you recently?** | 2.6 | 2.2 |
| **Has anyone close to you called you names or put you down or made you feel bad recently?** | 10.5 | 8.4 |
| **Dependence** | **11.1** | **11.5** |
| **Do you have enough privacy at home?** | 6.9 | 7.4 |
| **Do you trust most people in your family?** | 6.7 | 6.9 |
| **Can you take your own medication and get around by yourself?** | 2.8 | 3.3 |
| **Dejection** | **18.1** | **18.0** |
| **Are you sad or lonely often?** | 9.6 | 9.6 |
| **Do you feel that nobody wants you around?** | 3.5 | 3.1 |
| **Do you feel uncomfortable with anyone in your family?** | 11.4 | 10.9 |
| **Coercion** | **10.9** | **10.1** |
| **Does someone in your family make you stay in bed or tell you are sick when you know you're not?** | 1.1 | 1.1 |
| **Has anyone forced you to do things you didn't want to do?** | 3.2 | 2.6 |
| **Has anyone taken things that belong to you without your OK?** | 9.1 | 8.4 |

Items that led to feelings of dejection, particularly loneliness and being uncomfortable with one or more members of their family, scored highest. The two other highest scoring

items were recently having someone close call you names, put you down or make you feel bad and having someone take things that belonged to you without your permission.

2 to 3 percent of participants stated that they were forced to do things they didn't want to, were afraid of someone in their family, weren't allowed to take their own medication or someone close to them had tried to hurt or harm them recently. Around 7 percent said they didn't have enough privacy at home and didn't trust most people in their family.

Table 2 shows the number of items recorded under each component category for participants 65 years and over. Feelings of dejection including being lonely and unwanted recorded the highest count, but a sense of dependence, relating to having enough privacy and being trusted showed the highest score for three items. The vulnerability and coercion components had few with three items recorded.

**Table 2. Elder Abuse Item Numbers by Component Categories 65+, NZLSA Wave II, 2012**

| | 0 items | 1 item | 2 items | 3 items |
|---|---|---|---|---|
| *Vulnerability* | 1,515 | 119 | 35 | 7 |
| *Dependence* | 1,482 | 131 | 27 | 36 |
| *Dejection* | 1,371 | 235 | 39 | 26 |
| *Coercion* | 1,505 | 138 | 23 | 6 |

*Gender, marital status and ethnicity*

Table 3 analyses the data of the 65+ group from the perspectives of gender, marital status and ethnicity. There were significant differences between women and men for each component, showing that women experienced a greater sense of vulnerability, dependence and dejection. They were: more afraid of someone in their family; were more likely to be called names and be put down; considered they had insufficient privacy; and were more likely to be sad and lonely often. However, surprisingly men were significantly more coerced than women and were more likely to have things that belonged to them taken without their permission.

The significant differences in marital status regarding abuse were for feelings of dejection and coercion. Divorced, separated and widowed people felt considerably more sad and lonely and uncomfortable with someone in their family. They also scored highly on the item that recorded people having things that belong to them taken without their permission. Civil union and de-facto couples and single people tended to score similarly across most items. Married people had the lowest elder abuse scores on each sub-scale with the exception of vulnerability, but even there the difference between theirs and the next lowest score was negligible.

Māori have been over-sampled in NZLSA. In Wave II they made up 32 percent (n = 543) of participants over 65 years. The numbers of elderly Pacific, Asian and other ethnicities were too small to provide statistical veracity. The responses demonstrated that older Māori record a significantly greater level of abuse than non-Māori. They report being coerced more than 2½ times the rate for non-Māori, meaning they are forced to do things they don't want to do and people take things from them without their permission. They scored higher than non-Māori on every elder abuse item on all four sub-scales. Apart from the coercion items, their highest percentage scores were for being called

names, being put down or made to feel bad recently and being uncomfortable with someone in their family.

**Table 3. Elder Abuse Sub-scales by Gender, Marital Status and Ethnicity 65+ NZLSA Wave II 2012**

| *Dimension* | Vulnerability | Dependence | Dejection | Coercion |
|---|---|---|---|---|
| | | | | |
| ***Gender***[5] | **<0.001** | **<0.001** | **<0.001** | **<0.001** |
| *Male* | 7.5 | 10.4 | 17.6 | 11.3 |
| *Female* | 11.3 | 12.4 | 18.2 | 8.7 |
| | | | | |
| ***Marital status***[6] | **ns** | **ns** | **<0.001** | **<0.001** |
| *Married* | 8.8 | 10.4 | 14.7 | 6.7 |
| *Civil Union/De-facto* | 8.6 | 17.3 | 17.3 | 13.0 |
| *Divorced/Separated* | 9.0 | 11.7 | 24.8 | 16.1 |
| *Widow/Widower* | 11.1 | 11.6 | 24.6 | 14.6 |
| *Single/Never Married* | 9.1 | 14.9 | 18.5 | 13.8 |
| | | | | |
| ***Māori/Non-Māori***[7] | **<0.001** | **<0.001** | **<0.001** | **<0.001** |
| *Māori* | 12.0 | 15.1 | 19.2 | 17.2 |
| *Non-Māori* | 8.0 | 9.1 | 17.1 | 6.3 |

*Wellbeing, Health, Depression and Loneliness*

Table 4 sets out the statistical associations between critical social and health variables and the four elder abuse sub-scales. Significant relationships were found between vulnerability, dependence, dejection and coercion and each of the wellbeing, health, depression and loneliness scales. While the strength of the correlation coefficients varied, the trend across all measures was consistent, showing that higher response rates on the elder abuse sub-scales were associated negatively with wellbeing and health and higher levels of depression and loneliness.

The correlations between the dejection sub-scale and each of the wellbeing (quality of life), health depression and loneliness scales, using Pearson's r, were highly significant at the <0.01 level. The only exception being the SF-12 physical health scale, which still demonstrated a significant relationship but not as strong as the others. The dejection sub-scale itemises psychological experiences such as feelings of sadness, loneliness, feeling unwanted and feeling uncomfortable with at least one family member. The vulnerability and coercion subscales, which refer more to physical and verbal actions of abuse, showed stronger correlation coefficients than the dependence sub-scale.

The associations with the two wellbeing and quality of life scales was reasonably consistent across the other three elder abuse sub-scales, showing a negative relationship (lower wellbeing and quality of life) with the sub-scales, even though the types of questions are quite different. WHOQoL-8 is a satisfaction scale that focuses on

[5] t-test statistic
[6] Chi-square statistic
[7] t-test statistic

broad life dimensions, whereas CASP-12 targets the specific aspects of control over one's life, autonomy, self-realisation and pleasure.

In contrast, the SF-12 physical and mental health scales differed consistently. While both noted significantly negative relationships with each elder abuse sub-scale, the relationships were weaker on the physical health component on all four measures. The correlations between physical health and both the vulnerability and coercion sub-scales were significant at the <0.05 level, while every other correlation in table 4 is significant at the <0.01 level.

**Table 4. Elder Abuse Sub-scales by Wellbeing, Health, Depression and Loneliness 65+, NZLSA Wave II 2012**

Statistical *significance and correlation coefficients*

| | **Vulnerability** | **Dependence** | **Dejection** | **Coercion** |
|---|---|---|---|---|
| ***Wellbeing*** | | | | |
| *WHOQoL-8* | <0.01, -.181 | <0.01, -.091 | <0.01, -.377 | <0.01, .153 |
| *CASP-12* | <0.01, -.174 | <0.01, -.141 | <0.01, -.406 | <0.01, -.129 |
| ***Health*** | | | | |
| *SF-12 Physical Component* | <0.05, -.056 | <0.01, -.078 | <0.01, -.120 | <0.05, -.060 |
| *SF-12 Mental Component* | <0.01, -.245 | <0.01 -.105 | <0.01, -.429 | <0.01, -166 |
| ***Depression*** | | | | |
| *CES-D-10* | <0.01, .201 | <0.01, .113 | <0.01, .432 | <0.01, .175 |
| ***Loneliness*** | | | | |
| *De Jong Gierveld Loneliness Scale* | <0.01, .267 | <0.01, .126 | <0.01.424 | <0.01, .211 |

The correlations between the loneliness and depression scales with the elder abuse sub-scales demonstrated similar results, but with very slightly stronger coefficients for the loneliness scale on each sub-scale.

To further investigate these six scales and their associations with elder abuse, four linear regressions were estimated for the 65+ data using one of the abuse components as the dependent variable in each. The two wellbeing scales, the two health scales, the depression and the loneliness scales were the independent variables entered into the model.

Table 5 shows that when each model was tested they displayed an F-test statistic with a p-value of <0.001 indicating that they were each significant as a whole. The model also independently confirmed the correlations noted above. However the significance of the t-test coefficients varied in the four models with only some of them demonstrating statistical significance while others didn't. Those that did are shown in table 5.

The variables most closely associated with vulnerability were loneliness and mental health, whereas the CASP-12 wellbeing scale and loneliness were more closely associated with dependence. The vulnerability items referred to people close to the participants doing bad things to them and so loneliness and mental health problems would seem to be a predictable outcome. Likewise the dependence items are largely

about control over one's life and so the CASP-12 scale's emphasis on measuring control, autonomy, self-realisation and pleasure is naturally associated. As such a loss of independence is associated with a loss of wellbeing on that particular scale. Dejection was particularly associated with loneliness, depression and a loss of wellbeing, and coercion with loneliness and depression.

**Table 5. Regression Analysis of Elder Abuse Components by Wellbeing, Health, Depression and Loneliness 65+, NZLSA Wave II 2012**

| *Elder abuse component* | F-test statistic for model | t-test: significant coefficients |
|---|---|---|
| ***Vulnerability*** | <0.001 | Loneliness <0.001 |
| | | SF-12 Mental Health <0.001 |
| | | |
| ***Dependence*** | <0.001 | CASP-12 <0.001 |
| | | Loneliness 0.029 |
| | | |
| ***Dejection*** | <0.001 | Loneliness <0.001 |
| | | Depression <0.001 |
| | | CASP-12 <0.001 |
| | | SF-12 Mental Health 0.008 |
| | | SF-12 Physical Health <0.011 |
| | | |
| ***Coercion*** | <0.001 | Loneliness <0.001 |
| | | Depression 0.007 |

*Prevalence projections*

The NZLSA database from wave II in 2012 was drawn from a national random sample of New Zealanders aged 50 and 86 years who lived independently or semi-independently. The survey was carried out during the second half of 2012 and can be expected to carry a similar population structure as the 2013 census data which was collected early that year. The prevalence proportions found in this study can be projected from 2013 every 10 years for 50 years using Statistics New Zealand's population projections (mid-range) by age (Statistics NZ 2014). The periods do not exactly coincide and the survey does not include persons in hospitals and other institutions for the aged. Furthermore the survey in 2012 also does not include senior citizens over the age of 86. Thus the projections set out in table 6 should be seen as indicative only. They display a projected trend and numbers which can be expected to be within the range of likely population counts rather than exact numbers.

Increases in elder abuse may not always be uniformly in line with the population count increases. However, the projections can be expected to under-estimate the actual prevalence of elder abuse because it is often hidden, shameful and older people may consider naming abuse could put at risk relationships they depend on.

The mid-range projections indicate a 41 percent increase in the numbers of people aged 65 years and over in New Zealand from 2013 to 2023, and a 32 percent increase off that enlarged population base between 2023 and 2033. The trend is then expected to slow somewhat to a 14 percent increase between 2033 and 2043 and a 7 percent increase between 2043 and 2053 before picking up again to 13 percent in the decade to 2063.

**Table 6. Elder Abuse Prevalence Projections by Component Percentages 65+, NZSA Wave II, 2012 and Statistics New Zealand Population Projections**

| | *Census* | *Elder Abuse Projections (mid-range)* | | | | |
|---|---|---|---|---|---|---|
| ***% per component Sub-scale*** | **2013** | **2023** | **2033** | **2043** | **2053** | **2063** |
| *Vulnerability 9.6* | 60,349 | 85,018 | 112,627 | 128,736 | 137,568 | 155,395 |
| *Dependence 11.5* | 72,293 | 101,844 | 134,918 | 154,215 | 164,795 | 186,151 |
| *Dejection 18.0* | 113,155 | 159,408 | 211,176 | 241,380 | 257,940 | 291,366 |
| *Coercion 10.1* | 63,492 | 89,446 | 118,493 | 135,441 | 144,733 | 163,489 |

Table 6 demonstrates the projected indicative increase for each component of the Elder Abuse scales used in the survey. The projections are larger for the dejection and dependence components which consist of items that are more psychological. The coercion and vulnerability components consist of more physical and verbal actions that abuse older people. The numbers on each component increase exponentially.

## DISCUSSION

This study has demonstrated that elder abuse, as measured by VASS, was prevalent for at least 1 in 10 participants aged 65 years and over on each of the four sub-scales in 2012. The significance of the finding is that a national random sample of over 1,500 older New Zealanders was used, and thus for the first time an evidence based assessment of the extent of elder abuse in the country has been able to be calculated. Furthermore the prevalence has been measured on four different scales, giving a greater insight into the extent of different types of abuse.

As already noted, elder abuse is a largely hidden phenomenon because of its associations with shame, embarrassment and the risk of upsetting someone an older person depends on. It follows that the responses collected in this study are those of people who were prepared to record actions of or reactions to abuse, and therefore the prevalence estimations probably under-estimate the full extent of elder abuse in New Zealand. Furthermore, the sample did not include older persons in hospitals or institutions for the elderly where elder abuse is considered to be more prevalent (WHO, 2014)

The two most frequently endorsed items were psychological: feeling uncomfortable with someone in your family; and feeling sad or lonely often. However, the next two most endorsed items refer directly to verbal and physical actions imposed on an older person: being called names, put down or made to feel bad recently; and having someone take things that belong to you without your permission. The high response to this latter item is consistent with Schofield's et. al. (2013) results with older Australian women and they suggest this item may be aligned with financial abuse. In line with the international body of literature referred to at the beginning of this paper, physical abuse and direct coercion items scored least in the 2 to 3 percent range: someone close to you has tried to hurt or harm you recently; and someone has forced you to do things you didn't want to do.

The gender analysis both confirmed and disconfirmed the bulk of other studies. Women certainly experienced considerably more abuse than men, but surprisingly men were significantly more coerced than women. This may be explained by the substantial item in the coercion component, which was having someone take things that belong to you

without your okay. If, as Schofield et. al. suggested, this item is aligned to financial abuse, then it is possible that a greater proportion of men are targets for this type of abuse.

For a country that has worked hard to address historical grievances with its indigenous people, the consistently high rates of elder abuse Māori experience when compared with non-Māori will be disappointing. These results are congruent with other studies where the dominant culture usually shows lower rates of elder abuse. The survey did not ask whether the perpetrators were from within or outside the culture. The results however, indicate this is an area that requires systematic focus to reduce the rates.

This study also confirmed the Tobbiasz-Adamcyk's et. al. results that showed divorced, separated and widowed older people experienced a greater level of dejection with sad and lonely feelings, whereas partnered people showed lower levels.

The consistent correlation results between each elder abuse component and lower health and wellbeing scores underlines the personal damage people experience and the seriousness policy challenges because of the inevitable resulting costs for healthcare. This was further underlined by the similar associations found between elder abuse and depression and loneliness.

The four different sub-scales usefully delineated the primary associations for the different types of abuse. Loneliness stood out as having the major relationship with elder abuse and the only factor that was primarily associated with all four components in the regression analysis. This is an important finding, because studies often carry out statistical tests of association between elder abuse and depression, but less so with loneliness. Depression also featured with the dejection and coercion components and mental health with vulnerability and dejection. The CASP measure of wellbeing was primarily associated with the dependence and dejection components which were more about trust and self-worth.

When the percentage endorsement rate for each elder abuse component is calculated for the 65 plus population in New Zealand, the numbers range from a little over 60,000 for the components that have verbal and physical abuse and coercion items, and considerably more for those with predominantly psychological items. The exponential increase in those numbers, if nothing is done to reduce elder abuse, is of serious concern. The 40 percent increase in the decade to 2023 and the 32 percent increase from that enlarged base from 2023 to 2033 alongside the strong associations with ill-health, lower wellbeing and increased depression and loneliness could prove very costly to governments and severely debilitating for the older people involved.

*Study Limitations*

The elder abuse scale and the wellbeing, health, depression and loneliness scales used in this study are self-report measures which have both positive and negative attributes. Their value lies in the responses that come directly from older New Zealanders, who in the final analysis are the only ones who really know what goes on in their lives and relationships. However self-report does not allow independent verification of each response, nor does it provide the context. For example, an older person may feel sad, lonely and unwanted but this could be disputed by a family member who says they are loved and well cared for. An older person may also be subject to cognitive impairment,

but this is somewhat offset by them having the capacity to complete a comprehensive postal questionnaire.

The measurement of elder abuse poses a number of difficulties which can lead to an under-estimation of the prevalence. Elder abuse is often hidden by both the perpetrator and the victim because it is usually considered to be shameful. Furthermore, vulnerable older people may not want to put critical relationships they depend on at risk by naming abuse, even though they experience some forms of abuse in those relationships.

As noted within the paper, the projections are based on census data of the total population 65 years and over. This is not a perfect match with the sample in this study which consisted of older people between the ages of 65 and 86 years who lived independently or semi-independently. It did not include persons in hospitals and other institutions for the aged.

## CONCLUSION

Elder abuse is pervasive in New Zealand, even though the vast majority of elderly people don't experience it. Furthermore it further marginalises people who are already marginalised. The damage to people of elder abuse is consistently negative as this study shows, and costly as a consequence. The current numbers provide reason enough for service providers and policy makers to become active in devising ways to reduce elder abuse. The projections show alarmingly just how essential it is to address these matters sooner rather than later, because of the personal distress to many older people and the increasing costs to government.

## ACKNOWLEDGEMENTS

Particular thanks to Anna Thompson for her work on the literature search for this study.

This study is part of the NZLSA research programme and the author acknowledges the contribution of fellow principal investigators Fiona Alpass, Christine Stephens and Peter King to the development of the database and the overall work of the programme.

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