



Identifying hoarding disorder in the elderly using the interRAI

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ABSTRACT

Objectives: Hoarding disorder (HD) is prevalent in older adults and contributes to morbidity and mortality. We attempted to estimate rates of hoarding amongst the elderly using the international Residential Assessment Instrument – Home Care (interRAI-HC).

Setting: The interRAI is a mandatory prerequisite in New Zealand (NZ) for government-funded community support or for entry into aged residential care.

Participants: All 50 years and older people who were assessed using the interRAI in the southern district health board of NZ.

Measurements: The age, gender, socially inappropriate or disruptive behaviour and squalor interRAI-HC items were analysed.

Results: During the 3 years study period (Jan., 2015 to Dec., 2017) 6655 people, mean age 81.4 ± 7.6 years, 56% female, were assessed. The interRAI socially inappropriate behaviour (includes hoarding as one of its descriptors) was present in 233 people (3.5%), herein defined as suspected HD. Squalid conditions were present in 98 additional people (1.5%). Mean age for suspected HD group was significantly younger [76.1 ± 6.3 years ($p < 0.001$)] and there were more males [57% ($p < 0.05$)] compared with the general interRAI group.

Conclusions: Rates of HD estimated by using the interRAI are in line with published international data. As identification of HD with the interRAI is not straightforward it's use as a screening tool for identifying HD should be validated in future studies.

1. Introduction

The main feature of hoarding disorder (HD) as conceptualized by the DSM-5 is a person's irrational, persistent difficulty in discarding or parting with possessions regardless of their actual value. When faced with the prospect of discarding or parting with their things, a person with HD will experience distress (Weiss & Khan, 2015). Not less important is that patients suffering from HD will usually collect so many things over a long period of time and the progressive accumulation of clutter in living or work areas will result in functional impairment and reduced quality of life, including associated health and safety risks (Frost, Steketee, & Williams, 2000; Tolin, Frost, Steketee, Gray, & Fitch, 2008).

HD is most prevalent in adults over age 50, although hoarding behaviours have been documented in individuals of all ages. The rate of HD in adults rises with increasing age, from 1% to 2% at age 20 to over 6% among individuals aged 70 and older living in the community (Samuels et al., 2008). The greatest rates of increase are seen in those

between the ages of 35 and 65 (Ayers, 2017). In the elderly, self-neglect related to pathological hoarding can be a significant contributor to morbidity and mortality (Snowdon, Shah, & Halliday, 2007).

It is estimated that hoarding disorder affects between 2 and 6 percent of the population. Despite being highly prevalent, particularly among older adults, HD is still under-recognized and inadequately treated in many, if not most, affected individuals. Little is known about the age-specific prevalence of hoarding in older age groups. Age-specific prevalence rates of HD in over 15,000 participants from the Netherlands Twins Register were recently examined. Prevalence of provisional HD diagnoses (2.1%) increased linearly by 20% with every 5 years of age between adolescents and up to 95 years of age (Cath, Nizar, Boomsma, & Mathews, 2017). HD has a substantial impact on individual and family well-being and represents a significant public health burden especially in the elderly (Kim, Steketee, & Frost, 2001; Thew & Salkovskis, 2016).

The aim of the present study was to estimate rates of hoarding amongst the elderly using the international Residential Assessment

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Instrument – Home Care (interRAI-HC).

2. Method

2.1. Participants

Participants in this study were New Zealanders aged 50 years and over, living in the Otago and Southland region [the Southern District Health Board (SDHB) catchment area] of the country who had undergone their first interRAI-HC assessment during the study period (1 January 2016 to 31 December 2017). If patients had multiple assessments during the study period, only data from the initial assessment was reviewed. Patient data was completely anonymised.

The SDHB covers the largest geographic region in New Zealand spanning a land area of over 62,356 square kilometres. SDHB serves an estimated resident population of 308,600, predominantly European and slightly older than the national average (15.5% vs., 12.9%). The average deprivation level is low - SDHB has only 13% of its total population living in quintile 5 (most deprived), much less than the national average of 20%. Around 6% of the Southern population aged 65 and over are in Aged Residential Care (rest homes and hospitals) – significantly higher than the national average of 5.2%.

2.2. Procedures

The international Residential Assessment Instrument (interRAI) is an evidence-based tool developed by international consensus. The 236-item electronically recorded assessment encompasses all aspects of an older person's life including physical, psychological and cognitive domains. The interRAI-Home Care (interRAI – HC) is a mandatory prerequisite in NZ for government-funded community support or for entry into aged residential care.

In New Zealand, interRAI is the primary assessment instrument in aged residential care and home and community services for older people living in the community. The Ministry of Health's New Zealand Best Practice Guidelines (2003) identified interRAI as the assessment that is best suited to improving the assessment and care of older people in New Zealand. A health professional has a structured conversation with the person and their family or carers, makes observations and refers to other clinical information. The assessor codes this information on software which creates a profile of the person's needs and opportunities. Assessment information automatically goes to a data warehouse, so without any extra effort for the older person or the assessor, population data is available to be used for service development, planning and research.

In 2015 and 2016 83,575 New Zealanders aged 65 and older completed an interRAI assessment of some sort, representing 12.2% of the elderly (interRAI, 2015/16). In the same period in the SDHB 21% of the elderly completed an interRAI assessment reflecting the higher proportion of older adults in this region.

2.3. Measurements

Six main items from the interRAI-HC data set were analysed in this initial exploration: age, gender, socially inappropriate or disruptive behaviour, disrepair of the home, limited access to home or rooms in home and squalor.

2.4. Analyses

Respondent characteristics are described using appropriate summary statistics. The unpaired two sided *t*-test and simple chi-squared test were used when appropriate. Level of significance was set at $p = 0.05$.

2.5. Ethical and cultural review

Ethical approval was obtained from the University of Otago Ethics Committee and the Department of Psychological Medicine Ethics Committee and the Ngai Tahu research committee was consulted.

3. Results

During the study's 3 years period (Jan., 2015 to Dec., 2017) 6655 people, mean age 81.4 ± 7.6 years, 56% female, were assessed using the interRAI-HC in the southern district health board of NZ.

There is no specific question related to hoarding in the interRAI, but it is encompassed in a more general question: "Socially inappropriate or disruptive behaviour" that is: "... made disruptive sounds or noises, screamed out, smeared or threw food or faeces, hoarded, rummaged through other's belongings." In 233 unique assessments (3.5%) this question was coded as present, exhibited on 1–2 of the last 3 days or exhibited daily. Mean age for this suspected HD group was significantly younger: 76.1 ± 6.3 years (unpaired two-tailed *t*-test; < 0.001) and there were more males (57% vs., 44%, Chi-square = 15.6; $p < 0.05$) compared with the general interRAI group.

In addition, 239 unique assessments coded as positive the item "Disrepair of the Home" that includes "hazardous clutter" as one of its descriptors and 657 unique assessments coded as positive the item "Limited access to home or rooms in home" that includes "difficulty manoeuvring within rooms" as one of its descriptors. It is of interest to note that a review of the assessments files revealed that in the "Disrepair of the Home" item a note as to hoarding being the reason for the disrepair was made in 26% of assessments, while in the "Limited access to home or rooms in home" item no mention of hoarding was noted.

Coding of 2 or more of the relevant descriptors was as follows: "Socially inappropriate or disruptive behaviour" plus "Disrepair of the Home" in 18 assessments, "Socially inappropriate or disruptive behaviour" plus "Limited access to home or rooms in home" in 25 assessments and all 3 descriptors (Socially inappropriate or disruptive behaviour + Limited access to home or rooms in home + Disrepair of the Home) were coded as positive in only 7 assessments.

The interRAI specifically asks about squalor in the following item: "Squalid condition—e.g., extremely dirty, infestation by rats or bugs." There were 98 unique assessments (1.5%) that were coded positive for this item. It is of interest to note that only in 13 assessments were both squalor and socially inappropriate behaviour coded as present.

4. Discussion

A recent literature search identified thirteen studies published during 2000–2015 that examined HD in late-life. Hoarding in the elderly generally was linked with social isolation, depression, co-morbid anxiety and PTSD, a variety of medical conditions and deficits in memory, attention, and executive function (Roane, Landers, Sherratt, & Wilson, 2017). To the best of our knowledge, the only study of HD in New Zealand focused on personality traits, demographic features, and physical and mental health variables in a random community sample of midlife participants. The prevalence of pathological hoarding was 2.5% and a further 4% reported sub-clinical symptoms of hoarding. Those with higher hoarding behavior scores were more likely to be single, female, unemployed, have a lower socio-economic status and have poorer self-reported mental health scores (Spittlehouse, Vierck, Pearson, & Joyce, 2016). This is in line with our findings except for the over-representation of males in the present study.

One of the largest studies of HD in older adults included 269 participants. Findings confirmed a relatively greater severity of hoarding behaviours in older adults compared to younger adults and suggest that related psychopathology plays a critical role in hoarding expression among older adults (Reid et al., 2011). Other research has shown that

the majority of elderly patients suffering from HD respond well to pharmacotherapy, emphasizing the need to identify and initiate treatment (Brakoulias, Eslick, & Starcevic, 2015).

The present study adds to the existing literature by demonstrating that hoarding and squalor are probably two different albeit overlapping presentations in the elderly. There were very few people assessed who were coded as positive for both squalor and hoarding. An Australian study reported that less than two thirds of cases of people living in squalor showed a moderate or severe degree of hoarding, in line with our assumption (Snowdon & Halliday, 2011).

Furthermore this study suggests using the interRAI assessment as a screening for HD can only reach broad inferences as there is only an indirect description of hoarding in the interRAI interview. Although lacking in specificity the rates of “Socially inappropriate or disruptive behaviour” are well within the range of rate of HD reported for this age group.

Attempting to increase sensitivity by cross tabulating with additional descriptors that may reflect hoarding reduces the captured population to around 1 in 10 of “suspected” HD based on the item that does include hoarding as a descriptor.

We tentatively conclude that the interRAI may be used as a first step in a process of identifying HD in vulnerable elderly cohorts.

Conflict of interest declaration

None.

Description of authors' roles

Y Barak designed the study, and wrote the paper. S Leitch assisted with analysis of findings and writing the article. P Greco was responsible for collecting the data and assisted in writing the article.

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