

Prevalence of Loneliness, Anxiety, and Depression among Older People Living in Long-Term Care: A Review

Sharifah Munirah Syed Elias

Kulliyyah of Nursing, International Islamic University Malaysia, Kuantan Campus, Pahang, Malaysia

ABSTRACT

Objective: The aim of this paper was to review prevalence rates of loneliness, anxiety, and depression among older people living in long-term care settings such as residential aged care facilities, nursing homes and assisted living facilities. **Method:** A systematic search of the literature was conducted using several electronic databases including Medline, CINAHL, PsycINFO, and the Cochrane library. **Results:** In total, 18 articles met the inclusion criteria for this review. The results indicated that the prevalence rates of loneliness (56% to 95.5%), anxiety (3.6% to 38%), and depression (11% to 85.5%) in older people living in long-term care settings are generally high. **Conclusion:** Further research on effective methods of reducing these symptoms is recommended.

KEYWORDS: anxiety, aged, depression, loneliness, prevalence

INTRODUCTION

Loneliness, anxiety, and depression may be more prevalent for older people living in long term care settings due to a range of factors including the move to an unfamiliar environment (1), loss of previous connections and networks (2, 3), and deterioration of physical health (1). Hodgson and Freedman (4) identified that most stress arises within the first four weeks after moving into a residential aged care facility (RACF), and primarily occurs due to the relocation experience.

Loneliness is a subjective and negative feeling that occurs when is a difference between an individual's expectations and their social network (5, 6). Older people may experience loneliness even if they are surrounded by other people (7). While there are no specific criteria for recognising loneliness in older people, as each person perceives loneliness differently, it is often accompanied by symptoms such as disturbed sleep, reduced satisfaction from social networking, diminished interest in social activities, and weight gain (5, 7).

Anxiety can occur suddenly or increasingly over hours or years. Longer durations of anxiety are more closely more related to anxiety disorders. Anxiety disorders can take multiple forms and can be classified into Generalised Anxiety Disorder (GAD), Panic Disorder, Specific Phobia, Separation Anxiety Disorder, and other types. GAD is the most common type of anxiety disorder in older people. The diagnostic criteria for anxiety include difficulty controlling worries and the presence of at least three associated symptoms such as muscle tension, restlessness, irritability, trouble concentrating, fatigue, and insomnia (8).

Depression is a common mental disorder that can present concurrently with loneliness and anxiety (9). Depression in later life can range from mild to major (10). A major depressive disorder is indicated by a broad range of symptoms; these may include prolonged depression, decreased interest and pleasure in activities, significant weight loss or weight gain, insomnia, psychomotor agitation or retardation, loss of energy, feelings of worthlessness, the reduced ability to think or concentrate and suicidal ideation (8).

The aim of this paper was to review prevalence rates of loneliness, anxiety, and depression in order to understand how often older people living in long-term care develop these problems. To the best of the author's knowledge, this study is the first attempt to identify the prevalence rates of loneliness, anxiety, and depression among older people living in long-term care settings such as RACFs, nursing homes, and assisted living facilities in a single study. Previous reviews of prevalence rates of anxiety involved older people with confirmed anxiety disorders and populations other than those in long-term care settings (7, 11). Previous reviews of prevalence rates of depression in older people living in long-term care settings were also based in developed countries in Europe and North America, and researchers suggested future reviews and collection of data from developing countries (12).

METHOD

A systematic search was conducted to identify relevant articles. The search was conducted using electronic databases including Medline, CINAHL, PsycINFO, and the Cochrane library, with the keywords: prevalence AND loneliness OR anxiety OR depression AND older people OR older adults OR elder AND residential care OR assisted living OR nursing home. Grey literature (Google Scholar) was included in the review. Reference lists of retrieved articles were read to identify additional studies eligible for inclusion. The search was limited to studies published in English and Malay from 2000 to 2017 in order to confine it to the most current studies. Studies were included if they estimated the prevalence of loneliness, anxiety, and depression in long-term care as an outcome measure. This review excluded studies that involved participants younger than 60 years and participants living in the

Corresponding address:

E-mail: shmunirah@iium.edu.my

Tel: +609-570 6000

Kulliyyah of Nursing, International Islamic University Malaysia, Jalan Hospital Campus, 5100 Kuantan, Pahang, Malaysia.

community or hospitals. Studies that used mixed populations, such as mixed age groups and mixed settings, were excluded, unless a clear separation between these populations was reported. The search strategy yielded 984 studies in total: Medline (46), CINAHL (256), PsycINFO (106), Cochrane library (433) and grey literature (143) (Figure 1).

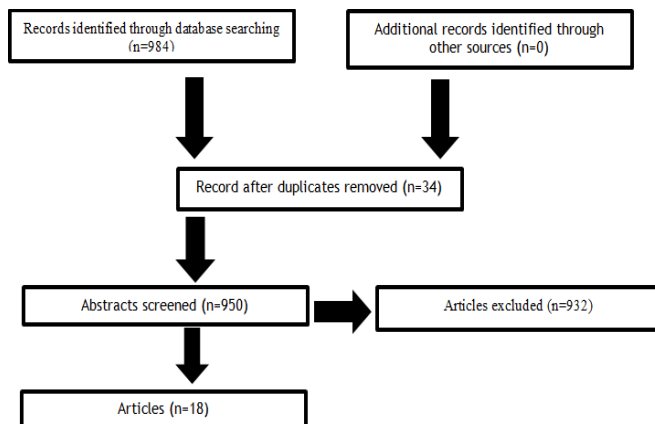


Figure 1: Search strategy

RESULTS

Of the 984 studies initially identified, 18 fully met the inclusion criteria, and 966 studies were excluded based on their abstracts. The reasons for excluding these 966 studies included not measuring prevalence, samples younger than 60 years, and full-text articles published in Spanish, Dutch, French and Norwegian. Of the 18 studies included, three measured both anxiety and depression and one measured both loneliness and depression. Two studies measured prevalence rates of loneliness, four measured prevalence rates of anxiety, and 16 measured the prevalence rates of depression (Table 1).

From the retrieved studies, two reported the prevalence rates of loneliness among older people in two different countries: 56% in Norway (13) and 95.5% in Malaysia (3). The search strategy found four studies investigating prevalence rates of anxiety that met the inclusion criteria (14-17). The prevalence rates ranged from 3.6% to 38%. Sixteen studies investigating the prevalence of depression met the inclusion criteria (3, 14-16, 18-30). The results revealed a huge variation in the prevalence rates of depression among older people living in long-term care settings, ranging from 11% to 85.5%. Overall, the results suggest high prevalence rates of loneliness, anxiety, and depression among older people living in long-term care. Malaysia reported the highest rates of loneliness at 95.5% (3), with anxiety at 38% (16) and depression at 85.5% (3). However, it is important to note that Nikmat's (3) study involved older people with cognitive impairment, which is associated with increased risk of loneliness and depression.

DISCUSSION

Overall, the researched reports differed in terms of methodology and research design implemented, which may account for the wide variability in findings. For example, the two studies addressing loneliness used distinctive research populations and different old age classifications. The anxiety studies involved different populations drawn from the United States of America (USA) (14, 17), Norway (15), and Malaysia (16). Likewise, the depression

studies were conducted in several countries including the USA, Taiwan, Malaysia, Hong Kong, India, Norway, England, and Wales. Six studies were conducted in Malaysia, with sample sizes differing substantially, ranging from 71 to 76735 participants.

The number of settings involved may also have influenced the variation of prevalence rates of depression. The studies reporting the prevalence rates of depression ranged from examining one setting to looking at 1,492 settings. This wide variety of settings may have contributed to the wide range of prevalence rates of depression. Although all the studies on loneliness and anxiety were conducted on more than one site, the range of settings was not too different. Loneliness studies involved four to 30 long-term care settings. Meanwhile, the anxiety studies involved 18 to 30 long-term care settings, except for one study that did not report the specific number of nursing homes involved (16).

The measures used for each of the key constructs differed between studies. For example, the loneliness studies used the Social Provision Scale (31) and the Friendship Scale (32). Similarly, several tools were used to screen for anxiety, including the Clinical Anxiety Scale (33), Beck Anxiety Inventory (34), and the Hospital Anxiety and Depression scale (35). Further, different depression scales were used, such as the 15 item Geriatric Depression Scale (GDS-15) (36), Minimum data set (MDS) assessment (37), 30 item Geriatric Depression Scale (GDS-30) (38), Center for Epidemiological Studies Depression Scale (39), Automated Geriatric Examination for Computer Assisted Taxonomy (AGECAT) (40), and Hospital Anxiety and Depression Scale (35). The studies also used different criteria for depression; for example, Nikmat (3) reported high prevalence rates of depression (85.5%) based on depressive symptoms using the 15 item Geriatric Depression Scale, while Brown (19) reported lower prevalence rates of depression (11%) based on participants who were

CONCLUSION

Despite the heterogeneity of the findings, it can be argued that the prevalence rates of loneliness, anxiety, and depression in older people living in long-term care settings is generally high. These high prevalence rates of loneliness, anxiety, and depression among older people living in long-term care settings indicate that these mental health problems need to be taken seriously in this population, as their severity may contribute to a decrease in the quality of life and increased morbidity and mortality of the individual. This is a pressing concern and provides strong motivation for further intervention research.

ACKNOWLEDGMENTS

The author would like to acknowledge the Malaysian Ministry of Education and International Islamic University Malaysia for the scholarship support.

CONFLICT OF INTEREST

The authors have no conflict of interest to declare with regard to this work.

Table 1: Prevalence rates of loneliness, anxiety and depression among older people living in long-term care settings

Study	Country	Total Participants/ Gender(N)	Minimum Age (Years)	Number Long- term Care	Prevalence Rate (%)	Measurements
Loneliness						
Drageset, Kirkevold, and Espehaug (2011)	Norway	227 F: 164 M: 63	65	30 NHs	56	SPS
Nikmat et al. (2015)	Malaysia	110 F: 55 M: 55	60	4 RACFs	95.5	FS
Anxiety						
Drageset, Eide, and Ranhoff (2013)	Norway	227 F: 164 M: 63	65	30 NHs	14	HADS
Jayasinghe, Rocha, Sheeran, Wyka, and Bruce (2013)	USA	249 F: 152 M: 97	65	30 NHs	3.2	CAS
Khairudin, Nasir, Zainah, Fatimah, and Fatimah (2011)	Malaysia	100 F: 49 M: 51	65	Not reported	38	BAI
Neville and Teri (2011)	USA	148 F: 124 M: 24	-	18 ALF	11 (RAID) 18 (CAS)	RAID CAS
Depression						
Al-Jawad, Rashid, and Narayan (2007)	Malaysia	167 F: 66 M: 101	60	One RACF	67	GDS-30
Brown, Lapane, and Luisi (2002)	USA	42901 F: 32275 M: 10626	65	1, 492 NHs	10.9	MDS
Drageset et al. (2013)	Norway	227 F: 164 M: 63	65	30 NHs	32	HADS
Goud and Nikhade (2015)	India	80 F: 51 M: 29	60	2 RACFs	53.8	GDS (no information about the total items)
Khairudin et al. (2011)	Malaysia	100 F: 49 M: 51	65	Not reported	64	GDS-15
Khaw, Teo, and Rashid (2009)	Malaysia	155 F: 82 M: 73	60	1 RACF	20.6	GDS-30
Ku, Liu, and Tsai (2006)	Taiwan	947 F: 1 M: 946	65	4 RACFs	35.5	GDS-15
Levin et al. (2007)	(USA)	76735 F: 57627 M: 19108	65	921 NHs	48	MDS
Lin, Wang, and Huang (2007)	Taiwan	138 F: 74 M: 64	65	8 NHs	81.8	CESD-S
Lun Chow et al. (2004)	Hong Kong	245 F: 154 M: 91	65	20 NHs	29	C-GDS-SF
McDougall, Matthews, Kvaal, Dewey, and Brayne (2007)	England & Wales	340 F: 260 M: 80	65	Not reported	27.1	AGECAT
Neville and Teri (2011)	USA	148 F: 124 M: 24	-	18 ALF	25 (GDS-15) 8.8 (CSSD)	CSSD
Nikmat et al. (2015)	Malaysia	110 F: 55 M: 55	60	4 RACFs	85.5	GDS-15
Normala, Azlini, Nurul Janah, and Lukman (2014)	Malaysia	98 F: 57 M: 41	60	8 RACFs	70.4	GDS-30
Shahar et al. (2011)	Malaysia	71 F: 25 M: 46	60	1 RACF	71.8	GDS-15
Tsai (2006)	Taiwan	174 F&M: -	65	9 NHs	55	GDS-15

Note: AGE-CAT: the Automated Geriatric Examination for Computer-assisted Taxonomy system; ALF: Assisted living facilities; BAI: Beck Anxiety Inventory; CAS: Clinical Anxiety Scale; C-GDS-SF: the Chinese version of the Geriatric Depression Scale-Short Form; CESD-S: the Center for Epidemiological Studies Depression Scale; CSSD: Cornell Scale for Depression in Dementia; F: Female; FS: Friendship Scale; GDS-15: the 15 items Geriatric Depression Scale; GDS-30: the 30 items Geriatric Depression Scale; HADS: The Hospital Anxiety and Depression Scale; M: Male; MDS: Minimum Data Set; NH: Nursing homes; RACF: Residential aged care facilities, RAID: The Rating Anxiety in Dementia; SPS: Social Provision Scale; USA: the United States of America.

REFERENCES

- Amzat IH, Jayawardena P. Emotional Loneliness and Coping Strategies: A Reference to Older Malaysians at Nursing Homes. *Journal of Population Ageing*. 2016;9(3):227-47.
- Wiles JL, Leibing A, Guberman N, Reeve J, Allen RES. The meaning of "aging in place" to older people. *Gerontologist*. 2012;52(3):357-66.
- Nikmat AW, Hashim NA, Omar SA, Razali S. Depression And Loneliness/Social Isolation Among Patients With Cognitive Impairment In Nursing Home. *ASEAN Journal of Psychiatry*. 2015;16(2):222-31.
- Hodgson N, Freedman VA, Granger DA, Erno A. Biobehavioral correlates of relocation in the frail elderly: Salivary cortisol, affect, and cognitive function. *Journal of the American Geriatrics Society*. 2004;52(11):1856.
- Pitkala KH. Loneliness in Nursing Homes. *Journal of the American Medical Directors Association*. 2016;17(8):680-1.
- Holwerda TJ, Van Tilburg TG, Deeg DJH, Schutter N, Van R, Dekker J, et al. Impact of loneliness and depression on mortality: results from the Longitudinal Ageing Study Amsterdam. *The British Journal of Psychiatry*. 2016.
- Ong A, Uchino B, Wethington E. Loneliness and Health in Older Adults: A Mini-Review and Synthesis. *Gerontology*. 2016;62:443-9.
- American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5. 5 ed 2013.
- Singh A, Misra N. Loneliness, depression and sociability in old age. *Industrial Psychiatry Journal*. 2009;18(1):51-5.
- Luppa M, Sikorski C, Luck T, Ehreke L, Konnopka A, Wiese B, et al. Age- and gender-specific prevalence of depression in latest-life - Systematic review and meta-analysis. *Journal of affective disorders*. 2012;136(3):212-21.
- Wolitzky-Taylor KB, Castriotta N, Lenze EJ, Stanley MA, Craske MG. Anxiety disorders in older adults: a comprehensive review. *Depression Anxiety*. 2010;27(2):190-211.
- Seitz D, Purandare N, Conn D. Prevalence of psychiatric disorders among older adults in long-term care homes: a systematic review. *International Psychogeriatrics*. 2010;22(7):1025-39.
- Drageset J, Kirkevold M, Espehaug B. Loneliness and social support among nursing home residents without cognitive impairment: a questionnaire survey. *International journal of nursing studies*. 2011;48(5):611-9.
- Neville C, Teri L. Anxiety, anxiety symptoms, and associations among older people with dementia in assisted-living facilities. *International journal of mental health nursing*. 2011;20(3):195-201.
- Drageset J, Eide GE, Ranhoff AH. Anxiety and depression among nursing home residents without cognitive impairment. *Scandinavian journal of caring sciences*. 2013;27(4):872-81.
- Khairudin R, Nasir R, Zainah AZ, Fatimah Y, Fatimah O. Depression, Anxiety and Locus of Control among Elderly with Dementia. *Pertanika Journal of Social Sciences & Humanities*. 2011;19:27-31.
- Jayasinghe N, Rocha LP, Sheeran T, Wyka K, Bruce ML. Anxiety Symptoms in Older Home Health Care Recipients: Prevalence and Associates. *Home Health Care Services Quarterly*. 2013;32(3):163-77.
- Al-Jawad M, Rashid AK, Narayan KA. Prevalence of undetected cognitive impairment and depression in residents of an elderly care home. *Medical Journal of Malaysia*. 2007;62(5):375.
- Brown MN, Lapane KL, Luisi AF. The Management of Depression in Older Nursing Home Residents. *Journal of the American Geriatrics Society*. 2002;50(1):69-76.
- Hoover DR, Siegel M, Lucas J, Kalay E, Gaboda D, Devanand DP, et al. Depression in the first year of stay for elderly long-term nursing home residents in the U.S.A. *International Psychogeriatrics*. 2010;22(7):1161-71.
- Ku YC, Liu WC, Tsai YF. Prevalence and risk factors for depressive symptoms among veterans home elders in Eastern Taiwan. *International journal of geriatric psychiatry*. 2006;21(12):1181-6.
- Levin CA, Wei W, Akincigil A, Lucas JA, Bilder S, Crystal S. Prevalence and treatment of diagnosed depression among elderly nursing home residents in Ohio. *Journal of the American Medical Directors Association*. 2007;8(9):585-94.
- Lin PC, Wang HH, Huang HT. Depressive symptoms among older residents at nursing homes in Taiwan. *Journal of clinical nursing*. 2007;16(9):1719-25.
- Lun Chow ES, Hei Kong BM, Po Wong MT, Draper B, Lin KL, Sabrina Ho SK, et al. The prevalence of depressive symptoms among elderly Chinese private nursing home residents in Hong Kong. *International journal of geriatric psychiatry*. 2004;19(8):734-40.
- McDougall FA, Matthews FE, Kvaal K, Dewey ME, Brayne C. Prevalence and symptomatology of depression in older people living in institutions in England and Wales. (Clinical report). *Age and Ageing*. 2007;36(5):562.
- Tsai YF. Self-Care Management and Risk Factors for Depressive Symptoms Among Elderly Nursing Home Residents in Taiwan. *Journal of Pain and Symptom Management*. 2006;32(2):140-7.
- Normala R, Azlini C, Nurul Jannah MJ, Lukman ZM. The Prevalence of Depression and Its Risk Factors among Malay Elderly in Residential Care. *American Journal of Applied Sciences*. 2014;11(9):1456-62.
- Goud AA, Nikhade NS. Prevalence of depression in older adults living in old age home. *International Archives of Integrated Medicine*. 2015;2(11):1-5.
- Khaw C, Teo C, Rashid A. Cognitive Impairment And Depression Among Residents Of An Elderly Care Home In Penang, Malaysia. *The Internet Journal of Psychiatry*. 2009;1(1).
- Shahar S, Hassan J, Sundar VV, Kong AY, Ping Chin S, Ahmad SA, et al. Determinants of depression and insomnia among institutionalized elderly people in Malaysia. *Asian Journal of Psychiatry*. 2011;4(3):188-95.
- Cutrona CE, Russel DW. The provisions of social relationships and adaptation to stress. *Advances in Personal Relationships*. Greenwich: Jai Press; 1987. p. 37-67.
- Hawthorne G. Measuring Social Isolation in Older Adults: Development and Initial Validation of the Friendship Scale. *An International and Interdisciplinary Journal for Quality-of-Life Measurement*. 2006;77(3):521-48.
- Snaith RP, Baugh SJ, Clayden AD, Husain A,

- Sipple MA. The Clinical Anxiety Scale: an instrument derived from the Hamilton Anxiety Scale. *The British journal of psychiatry : the journal of mental science.* 1982;141:518.
34. Beck AT, Epstein N, Brown G, Steer RA. An Inventory for Measuring Clinical Anxiety: Psychometric Properties. *Journal of Consulting and Clinical Psychology.* 1988;56(6):893-7.
 35. Zigmond AS, Snaith RP. The Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica.* 1983;67(6):361-70.
 36. Sheikh JI, Yesavage JA. Geriatric Depression Scale (GDS): Recent evidence and development of a shorter version. *Clinical Gerontology.* 1986;5(1-2):165-73.
 37. Minimum Data Set Plus Training Manual. Natick, MA: Eliot Press; 1991.
 38. Yesavage JA, Brink TL, Rose TL, Lum O, Huang V, Adey M, et al. Development and validation of a geriatric depression screening scale: A preliminary report. *Journal of Psychiatric Research.* 1982;17(1):37-49.
 39. Radloff LS. The CES-D Scale. *Applied Psychological Measurement.* 1977;1(3):385-401.
 40. Copeland JR, Dewey ME, Griffiths-Jones HM. A computerized psychiatric diagnostic system and case nomenclature for elderly subjects: GMS and AGE-CAT. *Psychological Medicine.* 1986;16(1):89-99.