

Quality in Ageing and Older Adults

Title: 'On their own' social isolation, loneliness and chronic musculoskeletal pain in older adults

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ABSTRACT

Purpose: In this paper, the concepts of social isolation and loneliness will be explored in relation to people with chronic musculoskeletal pain. Through this, biological, psychological and social factors will be examined to consider how we can identify people at risk of social isolation and loneliness who have chronic musculoskeletal pain and secondly how health professionals may intervene to reduce their effects.

Design/methodology/approach: Conceptual paper.

Findings: Social isolation and loneliness is evident in people with chronic musculoskeletal diseases. This may be bi-directional where both pain may lead to social isolation and loneliness, or social isolation and loneliness may exacerbate pain. Interventions to improve the symptoms of chronic musculoskeletal pain, and approaches around social participation and engagement should be adopted in combination to ameliorate this potentially disabling scenario.

Originality/value: There remains limited evidence around the prevalence and management of social isolation and loneliness for people with chronic musculoskeletal pain. By raising awareness of social isolation and loneliness in this population, people with chronic musculoskeletal pain may be better supported to reduce the negative impact that social isolation and loneliness can have on their health and well-being.

KEYWORDS: Musculoskeletal; Arthritis; Loneliness; Isolation; Morbidity; Depression; Rheumatology

INTRODUCTION

Chronic musculoskeletal pain is a major cause of functional impairment, disability and reduced quality of life for older adults (Moradi-Lakeh *et al.*, 2017). Whilst previous literature has acknowledged an association between social isolation and pain, there remains limited discussion on how it may be tackled. In this paper, we will further explore the concepts around social isolation and loneliness for this specific group of older adults, and consider what could be done to mitigate the adverse effects associated with these on health and well-being.

Musculoskeletal pain older adults

Chronic musculoskeletal pain, a condition characterised by pain, joint stiffness, disability, functional impairment and reduced quality of life (Lee *et al.*, 2015). It is a major health burden across all age groups (Mody and Brooks, 2012). The prevalence of chronic musculoskeletal pain has been reported as 66% in those over 65 years (Elliott *et al.*, 1999) and higher for those aged 80 years and above (Lonser, 2010). There has been an increase in population ageing in most countries, with the fastest growing group being those over 80 years (Abdulla *et al.*, 2013). Chronic musculoskeletal pain is multifactorial, being associated with physical and psychosocial difficulties (Beneitez and Nieto, 2017). Despite considerable research undertaken during the past 20 years on the diagnosis and treatment of chronic musculoskeletal pain, there remains poor understand on its effective treatment with pharmacological and non-pharmacological interventions (Ojala *et al.*, 2015).

Social isolation and loneliness

Social isolation is the lack of meaningful and sustained communication or interaction with friends, family and the wider community (Wenger *et al.*, 1996). Loneliness refers to the subjective feeling of being alone or apart from other people (Ernst and Cacioppo, 1999). It is a balance between desired and actual social contact (Ernst and Cacioppo, 1999). Whilst social isolation and loneliness are inter-related, each reflect a different concept (Routasalo *et al.*, 2006). Examples of social participation can include charity/volunteer work, attending sports/social clubs, educational/training courses or joining political/community organisations. It has been estimated that approximately five percent of older people in England are categorised as 'completely' isolated (Shankar *et al.*, 2013).

Social isolation and loneliness are associated with a negative self-assessment of health and well-being in older adults (Golden *et al.*, 2009; Landeiro *et al.*, 2016; Tivis *et al.*, 2011). This can result in adverse health outcomes including poor physical and mental health, maladaptive behaviours and an increased likelihood of institutionalisation (Luanaigh and Lawlor, 2008; Courtin and Knapp, 2015). It is associated with increased emergency department admissions and greater length of hospital stay (Landeiro *et al.*, 2016; Lim *et al.*, 2006). People who report being socially isolated or lonely also report less exercise participation, greater tobacco use and have a greater number of long-term medical conditions compared to those with greater social participation behaviours (Golden *et al.*, 2009; Landeiro *et al.*, 2016).

Impact of Social Isolation and Loneliness for People with Musculoskeletal Pain

The principal symptoms of musculoskeletal pain are pain, muscle atrophy, fatigue and associated anxiety and depression (Veronese *et al.*, 2016). The consequences of this are reduced independence, decreased functional capability, and consequentially, a reduction in quality of life. It is therefore no surprise that previous research have demonstrated the increase in social isolation and loneliness through chronic musculoskeletal pain (Wolf and Davis, 2014; Chan *et al.*, 2014; Jaremka *et al.*, 2014). There is also potential reverse causation where: (1) pain may lead to social isolation and loneliness through disability, but also (2) social isolation and loneliness may increase the opportunity for rumination and negative thinking about pain, to increase pain perception (Wolf *et al.*, 2015; Jaremka *et al.*, 2014). Through this, pain, social isolation and loneliness may spiral in the absence of support and intervention.

In a similar way to frailty, musculoskeletal pain can reduce an individual's actual or perceived capability for physical engagement in society and pre-existing social networks. Musculoskeletal pain management and support to foster improved physical activity behaviours can enable an increase in an individual's social engagement (Robins *et al.*, 2016). However, for those with debilitating symptoms which are challenging to manage, technological advances through telecommunications and social media have allowed people to interact with previous or new social networks (Petersen *et al.*, 2016; Gao *et al.*, 2016; Webber and Fendt-Newlin, 2017).

By increasing social engagement and decreasing loneliness through whatever means, people with chronic musculoskeletal pain can have a significant improvement in physical and mental health (Sturgeon and Zautra, 2016). Parrish *et al.* (2008) reported that increasing interpersonal events had a significant improvement in fatigue associated with musculoskeletal pain. Furthermore the positive effects of social engagement programmes have on physical and mental health and reducing

institutionalisation, emergency department admissions and hospital length of stay when people are admitted (Gardiner *et al.*, 2016; Dicken *et al.*, 2011), are particularly important on wider health challenges which older adults face (Luanaigh and Lawlor, 2008; Courtin and Knapp, 2015; Lim *et al.*, 2006).

Interventions

There are a wide range of interventions which have been developed to address social isolation and loneliness for older adults (Gardiner *et al.*, 2016). These have included community development interventions and groups, home visits, buddy systems and internet training (Dicken *et al.*, 2011). Whilst these appear to be effective, no one particular model has been shown to be 'optimal' for older adults nor specifically for those with chronic musculoskeletal pain.

More recently, there is a growing body of evidence around 'acceptance-based' pain management programmes (Mathias *et al.*, 2014). These include treatment approaches such as acceptance and commitment therapy, mindfulness and contextual cognitive behaviour therapy (Mathias *et al.*, 2014; McCracken and Vowles, 2014). People with chronic musculoskeletal pain conceptualise and hold different meanings of acceptance of pain and symptoms (Biguet *et al.*, 2016). By tailoring social integration and activity programmes around loneliness and isolation, acknowledging people's acceptance to their chronic pain states, such activity programmes may be more sustainable for older adults. These cognitive approaches may be valuable for individuals to consider when planning and goal-setting activities to address social isolation and loneliness. Furthermore, there is an evidence-base around internet-delivered acceptance and commitment therapy for those with severe physical disability associated with chronic pain disorders (Buhrman *et al.*, 2013). Through this, those who are limited in their physical function, those with reduced access to transport and those who are geographically isolated may then have greater opportunities to gain help whilst developing new networks to mitigate the negative effects of social isolation and loneliness.

Recommendations

Social isolation and loneliness are health challenges faced by older adults. Those who have chronic musculoskeletal pain have a greater risk of being socially isolated or lonely. Symptom management (principally pain, muscle atrophy, fatigue and depressive symptoms with disability and functional impairment) is important to facilitate greater physical activity and consequential social engagement. However this may not be sufficient, and further support to intervene in addressing these problems may be warranted. Such interventions should be tailored, not only to an individual's desires and goals towards socially engagement, but to how social isolation relates to their personal

musculoskeletal pain experiences and beliefs. Whilst such strategies may be costly to both health and social care services (Husk *et al.*, 2016; Mossabir *et al.*, 2015), this may be offset through reduced health and service care burden in accident and emergency admissions, formal and informal carer costs and reduced primary and secondary care utilisations (Husk *et al.*, 2016; Landeiro *et al.*, 2016; Lim *et al.*, 2006; Mossabir *et al.*, 2015). Through this, biopsychosocial features of an individual's disease can be sufficiently addressed for sustainable improvements in symptom management and social engagement. The development and testing of such a tailored social engagement intervention with a pain management component is a research priority. This should be evaluated through quality of life, pain and symptom control outcomes, in addition to both health economic measures and assessment tools to estimate social isolation (i.e. Lubben Social Network Scale (Lunnen and Gironde, 2000) or the Berkman-Syme Social Network Index (Berkman and Syme, 1979)) and loneliness (i.e. Revised University of California, Los Angeles (UCLA) Loneliness Scale (Hughes *et al.*, 2004)). Following this, healthcare professionals may be 'armed' with an evidenced-based intervention to improve outcomes for this population who have previously been largely under/un-researched.

CONCLUSIONS

Placing social isolation and loneliness on the 'radar' of healthcare professionals, and providing a stronger evidence-base on-which to make clinical judgements, are the first steps in providing better care for older adults with chronic musculoskeletal pain. Given the significant health consequences of social isolation and loneliness on older adults, and the high prevalence of chronic musculoskeletal pain in this population, such a health challenge should not be overlooked.

REFERENCES

Abdulla, A., Adams, N., Bone, M., Elliott, A.M., Gaffin, J., Jones, D., Knaggs, R., Martin, D., Sampson, L., Schofield, P. and British Geriatrics Society. (2013), "Guidance on the management of pain in older people". Age and Ageing, Vol. 42, pp. Suppl 1:i1-57.

Beneitez, I. and Nieto, R. (2017), "Do we understand pain from a biopsychosocial perspective? A review and discussion of the usefulness of some pain terms". Pain Management, Vol. 7 No, 1, pp. 41-8.

Berkman, L.F. and Syme, S.L. (1979), "Social networks, host resistance, and mortality: a nine-year follow-up study of Alameda County residents". American Journal of Epidemiology, Vol. 109, pp. 186-204.

Biguet, G., Nilsson Wikmar, L., Bullington, J., Flink, B. and Löfgren, M. (2016), "Meanings of "acceptance" for patients with long-term pain when starting rehabilitation". Disability and Rehabilitation, Vol. 38 No. 13, pp.1257-67.

Buhrman, M., Skoglund, A., Husell, J., Bergström, K., Gordh, T., Hursti, T., Bendelin, N., Furmark, T. and Andersson, G. (2013), "Guided internet-delivered acceptance and commitment therapy for chronic pain patients: a randomized controlled trial". Behaviour Research in Therapy, Vol. 51 No 6, pp. 307-15.

Chan, W.C., Kwan, C.W., Chi, I. and Chong, A.M. (2014), "The impact of loneliness on the relationship between depression and pain of Hong Kong Chinese terminally ill patients". Journal of Palliative Medicine, Vol. 17 No. 5, pp. 527-32.

Courtin, E. and Knapp, M. (2015), "Social isolation, loneliness and health in old age: a scoping review". Health and Social Care in the Community. In Press.

Dickens, A.P., Richards, S.H., Greaves, C.J. and Campbell, J.L. (2011), "Interventions targeting social isolation in older people: a systematic review". BMC Public Health, Vol. 11 No. 47.

Elliott, A.M., Smith, B.H., Penny, K.I., Smith, W.C. and Chambers, W.A. (1999), "The epidemiology of chronic pain in the community". The Lancet, Vol. 354, pp. 1248-52.

Ernst, J.M. and Cacioppo, J.T. (1999), "Lonely hearts: psychological perspectives on loneliness". Applied and Preventive Psychology, Vol. 8, pp.1-22.

Gao, Y., Li, A., Zhu, L., Liu, X. and Liu X. (2016), "How smartphone usage correlates with social anxiety and loneliness". PeerJ, Vol. 4, pp.e2197.

Gardiner, C., Geldenhuys, G. and Gott, M. (2016), "Interventions to reduce social isolation and loneliness among older people: an integrative review". Health and Social Care in the Community. In Press.

Golden, J., Conroy, R.M., Bruce, I., Denihan, A., Greene, E., Kirby, M. and et al. (2009), "Loneliness, social supports, mood and wellbeing in community-dwelling elderly". International Journal of Geriatric Psychiatry, Vol. 24, pp.694-700

Hughes, M.E., Waite, L.J., Hawkey, L.C. and Cacioppo, J.T. (2004), "A short scale for measuring loneliness in large surveys: results from two population-based studies". Research in Aging, Vol. 26, pp. 655-72.

Husk, K., Lovell, R., Cooper, C., Stahl-Timmins, W. and Garside, R. (2016), "Participation in environmental enhancement and conservation activities for health and well-being in adults: a review of quantitative and qualitative evidence". Cochrane Database of Systematic Reviews, Vol. 5. No. CD010351.

Jaremka, L.M., Andridge, R.R., Fagundes, C.P., Alfano, C.M., Pivoski, S.P., Lipari, A.M., Agnese, D.M., Arnold, M.W., Farrar, W.B., Yee, L.D., Carson, W.E. 3rd, Bekaii-Saab, T., Martin, E.W. Jr, Schmidt, C.R. and Kiecolt-Glaser, J.K. (2014), "Pain, depression, and fatigue: loneliness as a longitudinal risk factor". Health Psychology, Vol. 33 No. 9, pp.948-57.

Landeiro, F., Leal, J. and Gray, A.M. (2016), "The impact of social isolation on delayed hospital discharges of older hip fracture patients and associated costs". Osteoporosis International, Vol. 27, pp. 737-45.

Lee, H., Hübscher, M., Moseley, G.L., Kamper, S.J., Traeger, A.C., Mansell, G., and McAuley JH. (2015), "How does pain lead to disability? A systematic review and meta-analysis of mediation studies in people with back and neck pain". Pain, Vol. 56 No. 6, pp. 988-97.

Lim, S.C., Doshi, V., Castasus, B., Lim, J.K. and Mamun, K. (2006), "Factors causing delay in discharge of elderly patients in an acute care hospital". Annals of the Academy of Medicine Singapore, Vol. 35, pp.27-32.

Loeser, R.F. (2010), "Age-Related Changes in the Musculoskeletal System and the Development of Osteoarthritis". Clinics in Geriatric Medicine, Vol. 26, pp.371-386.

Luanaigh, C.O. and Lawlor, B.A. (2008), "Loneliness and the health of older people". International Journal of Geriatric Psychiatry, Vol. 23, pp. 1213-21.

Lubben, J.E. and Gironda, M.W. (2000), "Social support networks". In: Comprehensive Geriatric Assessment, Osterweil, D., Brummel-Smith, K. and Beck, J.C. (Eds). New York: McGraw-Hill, 2000, pp. 121-137.

Mathias, B., Parry-Jones, B. and Huws, J.C. (2014), "Individual experiences of an acceptance-based pain management programme: an interpretative phenomenological analysis". Psychology in Health, Vol. 29 No. 3, pp.279-96.

McCracken, L.M, and Vowles, K.E. (2014), "Acceptance and commitment therapy and mindfulness for chronic pain: model, process, and progress". American Psychology, Vol. 69 No. 2, pp.178-87.

Mody, G.M. and Brooks, P.M. (2012), "Improving musculoskeletal health: global issues". Best Practice in Research and Clinical Rheumatology, Vol. 26, pp.237-49.

Moradi-Lakeh, M., Forouzanfar, M.H., Vollset, S.E., El Bcheraoui, C., Daoud, F., Afshin, A. and et al. (2017), "Burden of musculoskeletal disorders in the Eastern Mediterranean Region, 1990-2013: findings from the Global Burden of Disease Study" Annals of Rheumatic Diseases. In Press.

Mossabir, R., Morris, R., Kennedy, A., Blickem, C. and Rogers, A. (2015), "A scoping review to understand the effectiveness of linking schemes from healthcare providers to community resources to improve the health and well-being of people with long-term conditions". Health and Social Care in the Community, Vol. 23 No. 5, pp.467-84.

Ojala, T., Häkkinen, A., Karppinen, J., Sipilä, K., Suutama, T. and Piirainen, A. (2015), "Chronic pain affects the whole person--a phenomenological study". Disability and Rehabilitation, Vol. 37 No. 4, pp. 363-71.

Parrish, B.P., Zautra, A.J. and Davis, M.C. (2008), "The role of positive and negative interpersonal events on daily fatigue in women with fibromyalgia, rheumatoid arthritis, and osteoarthritis". Health Psychology, Vol. 27 No. 6, pp.694-702.

Petersen, J., Thielke, S., Austin, D. and Kaye, J. (2016). "Phone behaviour and its relationship to loneliness in older adults". Aging and Mental Health, Vol. 20 No. 10, pp.1084-91.

Robins, L.M., Hill, K.D., Finch, C.F., Clemson, L. and Haines, T. (2016), "The association between physical activity and social isolation in community-dwelling older adults". Aging and Mental Health. In Press.

Routasalo, P.E., Savikko, N., Tilvis, R.S., Strandberg, T.E. and Pitkälä, K.H. (2006), "Social contacts and their relationship to loneliness among aged people - a population-based study". Gerontology, Vol. 52, pp.181-7.

Shankar, A., Harner, M., McMunn, A. and Steptoe, A. (2013), "Social isolation and loneliness: relationships with cognitive function during 4 years of follow-up in the English Longitudinal Study of Ageing". Psychometric Medicine, Vol. 75, pp. 161-170.

Sturgeon, J.A. and Zautra, A.J. (2016), "Social pain and physical pain: shared paths to resilience". Pain Management, Vol. 6 No. 1, pp.63-74.

Tivis, R.S., Laitala, V., Routasalo, P.E. and Pitkälä, K.H. (2011), "Suffering from loneliness indicates significant mortality risk of older people. Journal of Aging Research, In Press.

Trompetter, H.R., Bohlmeijer, E.T., Veehof, M.M. and Schreurs, K.M. (2015), "Internet-based guided self-help intervention for chronic pain based on Acceptance and Commitment Therapy: a randomized controlled trial". Journal of Behavioural Medicine, Vol. 38 No. 1, pp.66-80.

Veronese, N., Stubbs, B., Solmi, M., Smith, T.O., Noale, M., Cooper, C. and Maggi, S. (2016), "Association between lower limb osteoarthritis and incidence of depressive symptoms: data from the osteoarthritis initiative". Age and Ageing, Press.

Webber, M. and Fendt-Newlin, M. (2017), "A review of social participation interventions for people with mental health problems". Society Psychiatry and Psychiatric Epidemiology, In Press.

Weisberg, M.B. and Clavel, A.L. Jr. (1999), "Why is chronic pain so difficult to treat? Psychological considerations from simple to complex care". Postgraduate Medicine, Vol. 106 No.6, pp.141-60.

Wenger, G.C., Davies, R., Shatahmasebi, S. and Scott, A. (1996), "Social isolation and loneliness in old age: review and model refinement". Ageing and Society, Vol. 16, pp.333-58.

Wolf, L.D., Davis, M.C., Yeung, E.W. and Tennen, H.A. (2015), "The within-day relation between lonely episodes and subsequent clinical pain in individuals with fibromyalgia: Mediating role of pain cognitions". Journal of Psychosomatic Research, Vol 79 No. 3, pp.202-6.

Wolf, L.D. and Davis, M.C. (2014), "Loneliness, daily pain, and perceptions of interpersonal events in adults with fibromyalgia. Health Psychology, Vol. 33 No. 9, pp.929-37.