Depression in the Elderly Population;

A Public Health Crisis that Needs Addressing

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Introduction

Understanding the Issue

It is a known fact that many countries in the world are facing the problem of an ageing populations. In the UK, around 12 million people are considered to be elderly, which is defined by the age of 65 or over. This phenomenon will continue over the next decade and it is estimated that by 2030, one in five people will be in this age group. It is also common knowledge that later in life, there is a higher prevalence of multiple chronic health conditions, causing many older adults to spend time in poor health and even disabled (Age UK, 2019). However, what many may not realise, is that depression also affects a significant proportion of the older generation: in the UK, 22% of elderly men and 28% of elderly women suffer from depression, which is higher than common conditions such as diabetes (Figure 1) (Royal College of Psychiatrists, 2018). Contrary to what many may think, depression is not a normal part of ageing; instead, elderly people are more susceptible to low mood as they are exposed to more risk factors including multiple co-morbidities and social isolation. A survey conducted by the Royal Society for Public Health revealed that a quarter of those between 18 and 34-years old thought that it was 'normal to be unhappy and depressed when you are old' (Royal College of Psychiatrists 2018). Unfortunately, I admit to having this preconception and I believe that many of my peers in medical school are also guilty of the same prejudice, which is why it felt important to write about this particular topic.

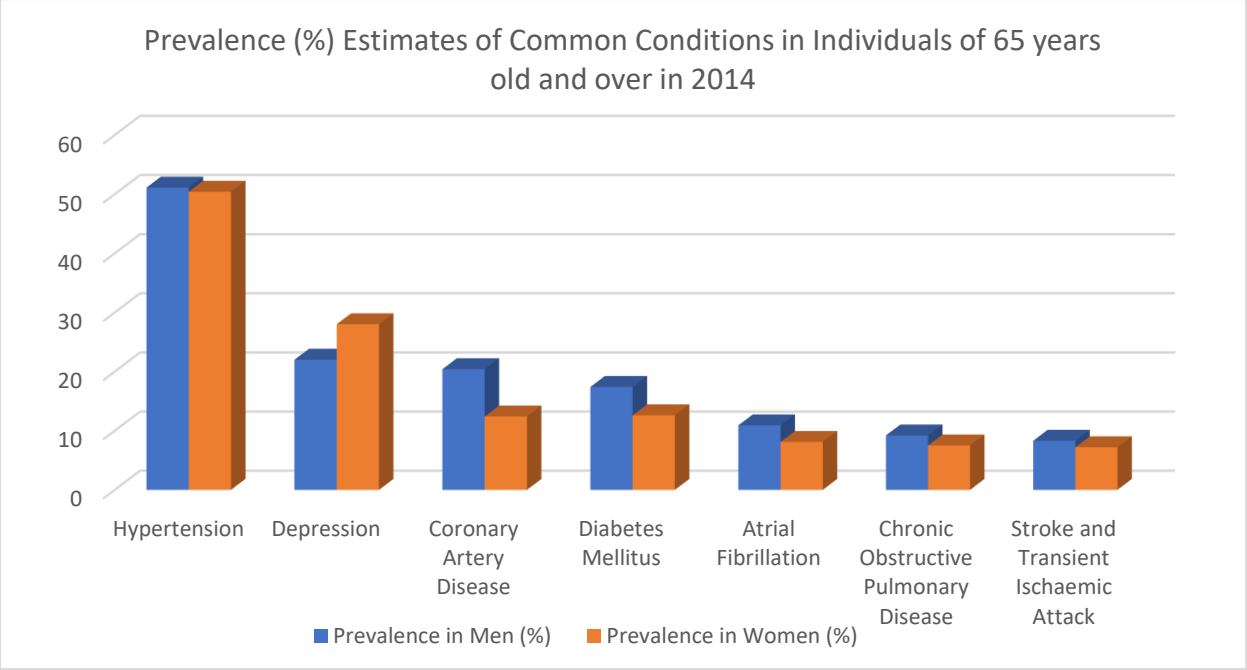

Figure 1 - Prevalence (%) Estimates of Common Conditions in Individuals of 65 years and over in 2014 (adapted from *UEMS Ageing Research Group, 2015. The Age UK Almanac Of Disease Profiles In Later Life. [online]*)

Depression in the elderly has a huge impact on their quality of life and is associated with poorer physical health, functional impairment and higher mortality. In fact, it has been the third leading cause of disability in the UK over the past twenty years (Figure 2) (Institute for Health Metrics and Evaluation. 2018). Depression is linked to a slower response to treatment for any other condition, and suboptimal treatment outcomes (Newmark et al, 2020). Furthermore, older people are at a higher risk of suicide, as they are more likely to experience exacerbating factors, including loneliness, bereavement and multiple chronic conditions (Conwell, van Orden and Caine, 2011). In 2018, the suicide rate amongst men aged between 80 to 84 was 17.2 deaths per 100,000, which is higher compared to those between 20 and 24, with a rate of 16.9 in 100,000 deaths (ons.gov.uk, 2020). It is also important to highlight that that suicide is more lethal in elderly people, meaning that there are more successful suicides per number of attempts. In younger adults, there may be around 200 attempted suicides for each completed one, whereas in elderly adults, there are only around 4 attempts (Conwell et al., 2011). Depression therefore leads to significant morbidity and mortality, thereby placing an important burden on the National Health Service (NHS).

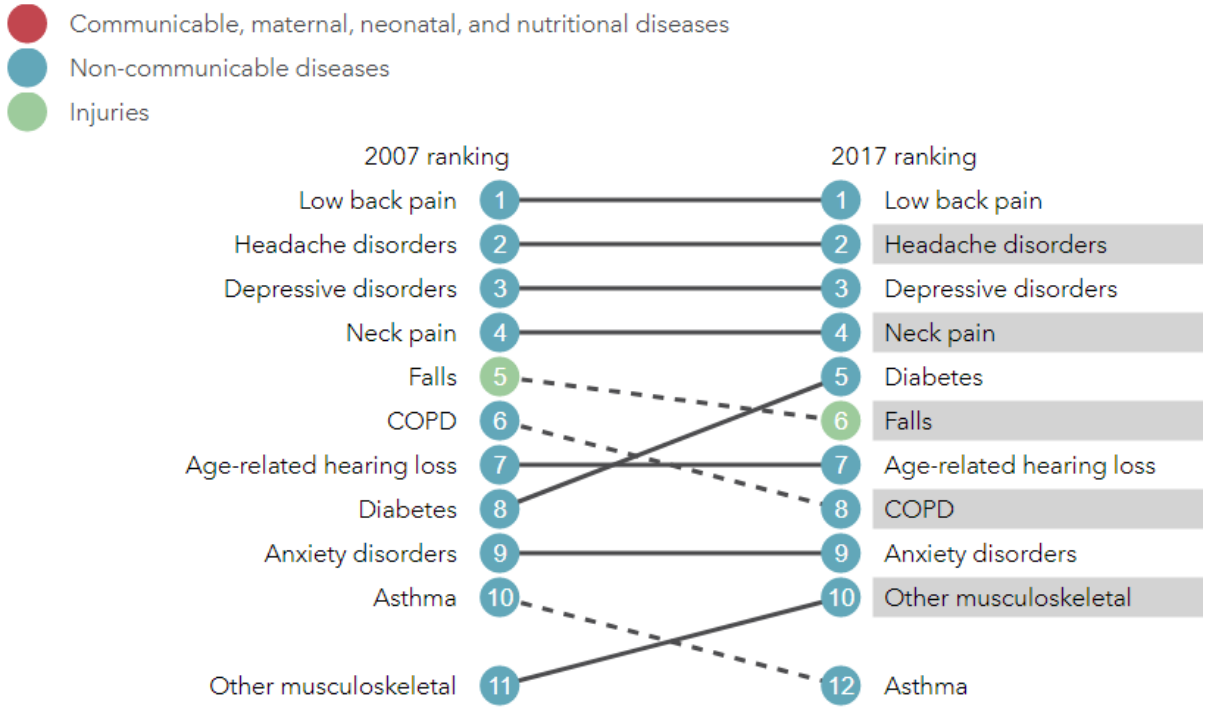

Figure 2 - Top 10 Causes of Disability in the United Kingdom from 2007 to 2017
(adapted from *Institute for Health Metrics and Evaluation. 2018. United Kingdom. [online] Available at: <http://www.healthdata.org/united-kingdom> [Accessed 28 June 2020].)*

Early identification and effective treatment of depressive symptoms is essential to improve the wellbeing of all those affected, as well as to relieve the healthcare system. That being said, it is estimated that as many as 85% of those above the age of 65 suffering from depression did not receive help from the NHS (Mental Health Foundation, 2016). This comes down to the many barriers to mental health services that are currently present in the UK. It involves age discrimination throughout the healthcare system, also affecting its providers, consequently leading to the under-identification of serious depressive symptoms in geriatric patients. Older adults also tend to lack proper understanding of mental health and are more likely to be reluctant to seek help. It is therefore a high priority to tackle these barriers in order to deliver adequate and effective care for elderly people with depression.

A Public Health Priority

Depression increases morbidity and mortality rates in the elderly population and are associated with more frequent healthcare visits, thereby placing a large financial burden on the NHS. Considering the ageing population and the prevalence of depression amongst adults over the age of 65, it is expected that by 2030, depression will be the leading cause of disease burden in developed countries (WHO 2004). Effective prevention strategies to reduce the incidence of depression in ageing population ought to be a public health priority (Okereke et al., 2013). Screening should also play an important role in tackling this public health crisis as it would allow early detection and early intervention to reduce the disease burden. It can be considered in care homes, hospital wards and primary care.

This public health crisis could be effectively addressed through the following strategies:

- Breaking down the barriers of access to mental health services, predominantly by addressing ageism in all levels of the healthcare system and improving mental health literacy in older adults.
- Implementing interventions to prevent the onset of depression in the continuously ageing population.
- Screening for depression in high risk groups by training staff to use easy and effective surveys in primary care, hospital wards and care homes.

Barriers to Mental Health Services for Older Adults

The NHS is coming short of providing adequate help for the large majority of elderly suffering from depression. In comparison to the younger population, elderly people are the most underserved in mental health services (Sorkin et al., 2016). There is evidence of ageism throughout different levels of the healthcare system as well as poorer mental health awareness in the elderly generation, which are both leading to an insufficiency of mental health services in older adults.

Age Discrimination within the Healthcare System

A recent report published by the Royal College of Psychiatrist brings forward the issue of ageism in the NHS. Mental health services took an 'ageless' approach, leading to many services being unable to handle the complex and specific needs of older patients, unintentionally leading to the discrimination against elderly people. This issue is also reflected in the Five Year Forward View for Mental Health in which it is clear that no specific measures are being taken to address mental health in older adults. Likewise, an investigation by Age UK in 2016 identified that only three out of the 51 mental health trusts in England who responded, had policies that specifically acknowledged older people. The vast majority only briefly mentioned this age group and even worse, three trusts only had a nutritional strategy and/or a policy on physical assessment for elderly patients. Considering the continuously ageing population and that people over 65 represent the majority of hospital admissions, not having a specific strategy for elderly is therefore a fundamental flaw.

Additionally, commissioning groups seem to be failing to properly acknowledge the mental health needs of the elderly population. In 2015, only three out of 130 had specific targets to increase the number of older adults accessing Improving Access to Psychological Therapies (IAPT), a program designed to improve the use of talking therapies to manage depression and anxiety. This highlights that local healthcare commissioners do not fully understand the significance of mental health disorders in later life (Age UK, 2016). Funding also represents a significant issue, with mental health services in general getting a budget cut of around 8% since 2010 (Royal College of Psychiatrists, 2018). With regards to mental health services for older adults, not only are they already underfunded by around 2.3 billion compared to the younger adults' services, they also saw their cash investment drop by 3.1% between 2011 and 2012. Despite these figures, the Five Year Forward View for Mental Health does not pledge any additional funding for services for older adults. They did however pledge £1.4 billion in 2020/21 for children and young people's mental health, and peri-natal care (Mental Health Taskforce, 2016).

Age discrimination is therefore present throughout different levels of the UK healthcare system, starting at the very top, with funding issues from the government, down to local commissioning groups failing to include older adults within their targets to access IAPT. This public health crisis will only worsen over the next decade(s) as the population continues to age and it is therefore of utmost importance to raise awareness and educate about how ageism is currently affecting the provision of mental health services for older adults. Additionally, the Mental Health Taskforce suggests forming a work stream in the government, local authorities and clinical commissioning groups (CCGs), that is specifically aimed at addressing the mental health needs of older adults (Age UK, 2016). It is essential to stop this 'ageless' approach to mental health services and increase the number of specialised units that focus on patients over the age of 65. These would be better equipped to manage the complexity of depression in elderly patients and would play a central role in training other health and social care providers. The success of specialist community-based mental health services was confirmed by the Care Quality Commission (2017) where over 85% were rated as good or outstanding. Ideally, there should be one unit that integrates the treatment of mental health in later life with the management of chronic physical conditions, thereby providing more efficient patient-centred care (Royal College of Psychiatrists, 2018).

Ageism amongst Healthcare Professionals

Healthcare professionals in the UK seem to be having difficulties in identifying patients with depression. A study conducted by Linden & Kurtz (2009) got doctors to manage two patients who, apart from their age, were identical. The results indicated age discrimination: the older patients received less appropriate diagnoses and treatments compared to the younger ones. They were seen as having dementia or a physical illness and were more likely to receive supportive counselling, as opposed to psychological and medical therapies (Royal College of Psychiatrists, 2018). It is true that the diagnosis of depression in older adults is more challenging as the clinical presentation is not always characterised by low mood or anhedonia. Instead, it may involve more physical symptoms, such as weight loss or fatigue, which can be perceived as being part of physical disorders (Age UK, 2016). However, through proper training of healthcare professionals focusing on the different presentation of depression in older adults and increasing their awareness of the current age discrimination, there is no reason why the identification of depression in older people should not improve.

These preconceptions also have an impact on the quality of treatment for older adults with depression. In the report 'Suffering in Silence: Age Inequality in Older People's Mental Health Care' published by the Royal College of Psychiatrists, a variety of studies supporting this are brought to light. Tadros et al. (2013) showed that only 3% of older people were being referred to mental health services, compared to 50% of younger people. Petit et al. (2017) found GPs are less likely to refer patients over 65 to IAPT, services that were designed to improve mental healthcare in England. Note that the target set by the Department of Health in 2011 was that 12% of referrals through IAPT should be older adults, however in 2016 it was still only 6.1% (Age UK, 2016). Ironically, older patients are more likely to attend to and benefit from the therapy clinics (Royal College of Psychiatrists, 2018). Furthermore, Morgen et al., (2018) saw the same lack of referrals for older people who self-harmed. These results are particularly concerning seeing that self-harm is a significant risk factor for suicide and the prevalence of the latter is higher in older men compared to younger men. Finally, Collins and Conra, (2018) concluded that GPs were guilty of believing that depression was an inevitable part of ageing, and that younger patients would benefit more from IAPT. All these studies therefore show that serious work needs to be done to change the attitudes of primary care workers towards depression in later life. It is therefore essential to educate GPs and other healthcare professionals, including hospital and care home staff, about the fact that depression is not a normal part of aging and that elderly patients also benefit from psychological interventions (Age UK, 2016). Taking this beyond healthcare, the society as a whole is guilty for perceiving older people as a burden, instead, it is important to recognise their contribution as volunteers and informal carers, such as helping with childcare (Royal College of Psychiatrists, 2018).

Patient Factors

The most fundamental issue is the poorer mental health literacy in older adults, compared to younger people: they are less likely to recognise symptoms of mental health conditions and are therefore less likely to seek help. In fact, many believe that their symptoms are normal (Wuthrich and Frei, 2015). Farrer et al. (2008) conducted a study in which participants of all ages were given a vignette that described depression. They found that those over the age of 70 were less able to identify depression and perceived less treatment options as beneficial. Indeed, Sorkin et al. (2016) found that one of the key barriers to seeking help was personal beliefs: 80.1% of their participants who were comprised of rural older adults, stated 'I should not need help' and 40% did not think treatment would be useful. Similarly, a poll in 2018 by YouGov found that almost half of people aged over 65 believed that older adults are less likely to recover from a mental health condition (Royal College of Psychiatrists, 2018). Additional barriers identified by Sorkin et al. (2016) included being

the lack of knowledge of mental health services, stigma and logistical issues such as transportation difficulties. Furthermore, it was not uncommon for patients to point out an element of mistrust in mental health providers and of reluctance to talk to strangers about personal problems. Some also reported feelings of embarrassment and worries about what others would think.

Studies have shown that such barriers can be broken down through mental health awareness interventions or stigma intervention programs (Sorkin et al., 2016). Over the past decades, mental health awareness campaigns have become more prominent and have been successful in making young adults more open to counselling and more likely to turn to loved ones to address their mental health (Farrer et al., 2008). However, these messages and campaigns were mostly conveyed over the internet and social media. Considering that only around one third of people over 75 have internet at home (Parliamentary and Health Service Ombudsman, 2015), it is not surprising that many elderly people were not exposed to these campaigns. This target segment also misses out on the benefits of mental health literacy programs, which are limited to school education programs. There is an urgent need to focus on the older population as a specific target in order to achieve the same positive results observed in the younger population so far. Campaigns' content and chosen media should be appropriately designed to reach this at-risk group.

Efforts have been made over the past few years by Age UK: they successfully campaigned to improve the use of IAPT by older adults. They used radio stations, magazines and their website to address stigma and increase mental health literacy in older people and their relatives or carers. Additionally, some CCGs have outlined specific strategies to improve access to IAPT for older adults. These included promotional posters and 'question and answer' stands in GP surgeries, the provision of interventions that were specifically designed for elderly patients and engagement with the local community to improve referrals (Age UK, 2016). Positive steps towards improving both mental health literacy and access to services by older adult are therefore already being taken in the UK and are showing promising results. It is important that these campaigns be further developed in order to tackle this public health crisis.

Preventing Depression in the Elderly

It should be a public health priority to implement strategies to prevent depression in later life, as it would play a central role in alleviating the disease burden on the healthcare system. A number of preventative methods have proven to be successful and should be implemented for those above the age of 65 that are deemed at high-risk of developing depression.

Who to Target?

There are three approaches to prevention in public health: universal, indicated and selective. Universal prevention targets the whole population and, although technically ideal, is simply not a realistic and efficient approach. Indicated and selective prevention both target smaller, high-risk groups and are therefore more effective ways of implementing prevention strategies. In the context of depression, indicated prevention targets the people who have some symptoms of depression but do not yet meet the full criteria for a definitive diagnosis. This is sometimes also referred to as minor or subthreshold depression and increases the risk of converting to Major Depressive Disorder (MDD) within a year by five times, compared to those with no such symptoms. Primary care is a good place to implement indicated prevention as most people with subthreshold depression see their GPs and evidence shows that those who committed suicide saw their primary care providers within a month of the event. Selective prevention targets older adults with high-risk factors for developing depression, such as physical illness or loneliness. Evidence from the US and the Netherlands targeted those with medical comorbidity, social isolation and functional impairment, all high-risk factors for depression in older adults, and found that selective prevention interventions in primary care had a theoretical number to treat (NNT) of 5 to 7, meaning that for every 5 to 7 people treated, 1 person would benefit from it (Okereke et al., 2013). On the other hand, Cuijpers et al., (2015) argues that these known risk factors have low specificity, meaning that most people with these factors will not develop depression. An alternative approach to selective prevention would be to focus on care homes instead. The prevalence of mental health illness in care home residents is 60%, with depression being the most prevalent one (Royal College of Psychiatrists, 2018).

Prevention through Psychological Therapies

NICE guidelines currently recommend low-intensity psychological intervention part of the stepwise approach to the treatment of depression (NICE 2009 [CG91]). However, the role of psychotherapies could be extended to prevention. A meta-analysis by van Zoonen et al. (2014) found that cognitive behavioural therapy (CBT) or interpersonal psychotherapy (IPT) were successful in decreasing the

incidence of depressive disorder in elderly by around 21%. They also compared indicated and selective prevention and saw no significant difference between them, with an overall NNT of 20. Considering the massive disease burden of depression, an NNT of 20 is more than satisfactory, especially comparing it to an NNT of 217 of the use of statins to prevent a non-fatal heart attack (The NNT Group, 2017). It is important to highlight that their participants were of all ages, nevertheless, the principles still apply to older adults. More studies therefore need to be undertaken to investigate the successes of CBT and IPT as preventative methods specifically for depression in later life.

Problem-solving therapy (PST) is a specific form of CBT which aims to improve a person's coping skills with regards to stressful life events (D. Pierce, 2012), and has been investigated by various studies as a tool for preventing depression in high-risk older patients. Rovner et al. (2007) for instance, focused on patients with macular degeneration, the main cause of blindness in older adults, and found that short-term PST was successful in reducing the incidence of depression by half in a two-month follow-up, compared to the patients receiving the usual care. Similarly, Charles et al. (2014) looked at the use of PST on older adults with subsyndromal depressive symptoms, who have a five-fold higher risk of converting to major depressive disorder within the next year. Interestingly, they used an 'active comparator', as opposed to a 'usual-care' control group, who received dietary coaching, including implementing a healthy diet and homework assignments. Both interventions were associated with lower rates of conversion to major depression, with an incidence of 9% over a period of two years. They also seemed to reduce the persistence of depressive symptoms. Not only does this study show the benefits of using PST as a preventative method for depression in elderly, but it also introduces dietary intervention as a potential candidate for prevention. Additionally, dietary coaching promoted social contact and would also be beneficial in preventing other disease like diabetes and cardiovascular conditions. Although these are very promising results, the lack of a control group receiving usual care means that the outcomes of this study are only preliminary and more research is required. Another potential preventative strategy to be identified is Brief Behavioural Treatment of Insomnia (BBTI). It successfully improved the quality of sleep, thereby reducing symptoms of depression.

There are a number of different psychological interventions that have shown to be effective in preventing the onset of depression in older adults. These are cheaper and much safer than pharmacological interventions, and they can be delivered by nurses, social workers and counsellors, thereby relieving the workload of doctors. All these advantages therefore make therapies such as PST, IPT and BBTI favourable to further integrate them within mental health services and primary care (Okereke et al., 2013).

Prevention by Tackling Loneliness

Older adults face a number of social stressors that increase the risk of developing depression. However, some are impossible to prevent, such as bereavement, or difficult to address, such as poverty. Loneliness on the hand, is also an important risk factor and can be tackled. It is a subjective feeling that comes from the perception of being alone and can has a wider impact on a person's health and well-being (see Figure 3). In the UK, 1.2 million elderly people reported feeling chronically lonely (Campaign to End Loneliness, 2020). In 2015, Age UK reported that as many as 17% of elderly stated to have contact with loved ones less than once a week and 11% seemed to have contact with people less than once a month. They also found that 49% of older people consider the television or their pets as their main form of company. These figures alone are enough to highlight the need to increase social contact in older adults (Age UK, 2019).

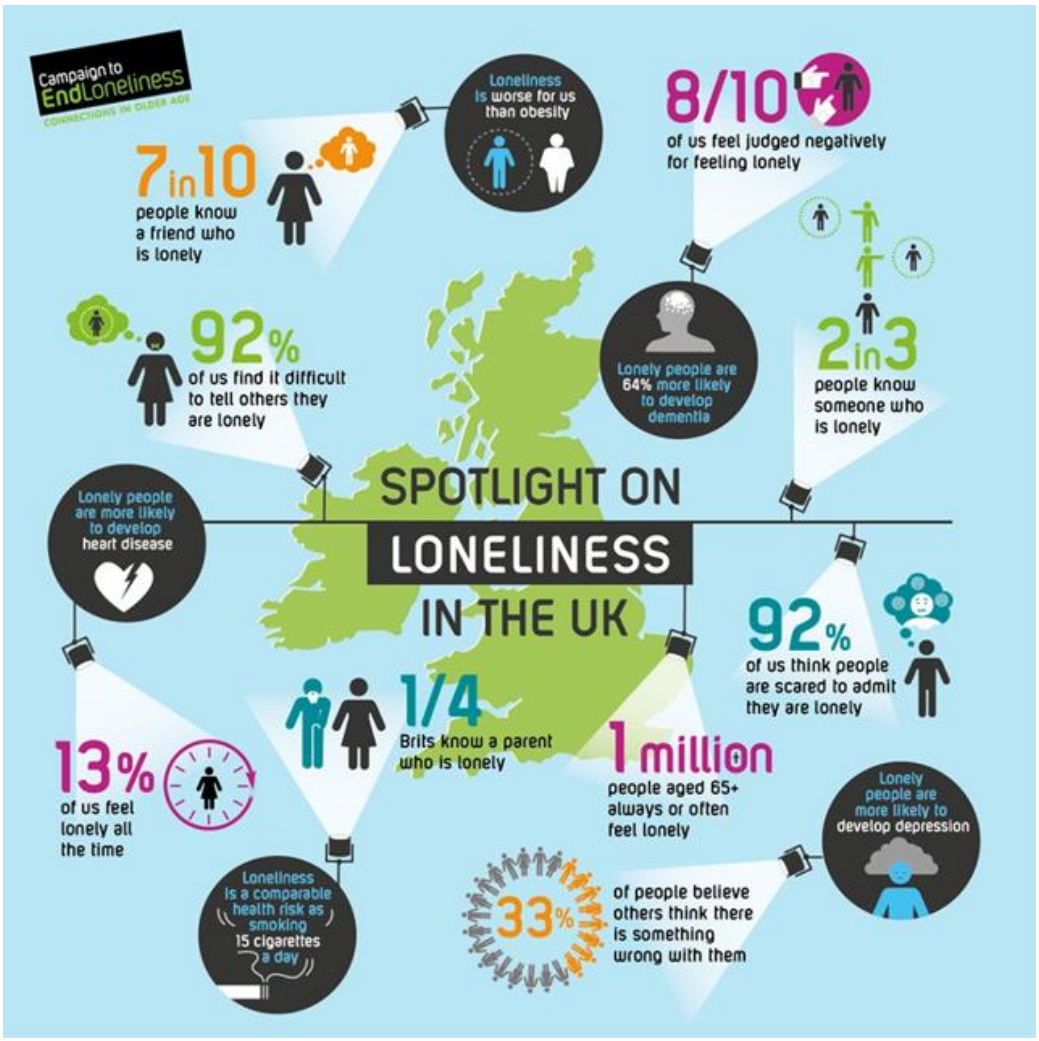

Figure 3 - The Wider Impact of Loneliness in the UK (reused from Campaign to End Loneliness. 2020. Campaign To End Loneliness | UK Charity |. [online] Available at: <https://www.campaigntoendloneliness.org/> [Accessed 25 June 2020].)

Loneliness is a recognised risk factor for depression and according to Dreyer et al., (2018), older adults living alone are more likely to suffer from a mental health condition (1 in 4) as opposed to those who live with others (1 in 5). In the article 'Loneliness: A disease?', Tiwari argues that 'loneliness may be pathognomic of depression in old age'. I saw this first-hand during my GP placement, where I saw a lady in her 70s who presented with depression. This was triggered by the fact that she recently moved from Cornwall to Northampton to be closer to her daughter, therefore leaving behind her close friends and community. She admitted feeling lonely despite living with her husband and being closer to her grand-children, which was causing her to develop symptoms of depression. Loneliness also increases the likelihood of suicide, as it precipitates suicidal thoughts and para-suicide (Stravynski and Boyer, 2001). Additionally, it has been linked to cardiovascular disease (Xia and Li, 2018) and Alzheimer's disease (Wilson et al., 2007), and since poor health is a contributing factor to depression, a vicious cycle is formed.

Implementing strategies to reduce loneliness is a worthwhile public health investment. An Australian mental health commissioning report analysed the cost effectiveness of addressing loneliness by implementing a 'Friendship Enrichment Programme'. This was carried out by instructors with a university- or professional education level psychology training and focused on enhancing current friendships and developing new ones, with the ultimate aim of promoting wellbeing and reducing loneliness. They found that for every Australian dollar (AUD) invested, the return was 1.35 after three years and 2.87 after five years. On a larger scale, the total cost of the intervention in this study, including training staff and advertising, was around 25 million AUD and resulted in saving 34 million AUD after three years, and 72.4 million AUD after five years. This report therefore shows the significant return on investment of tackling loneliness. Additionally, loneliness is also linked to dementia, heart disease and stroke, which they did not take into consideration when calculating the cost savings, meaning that the economic benefits of tackling loneliness goes beyond mental health (Mental Health Commission Australia, 2020).

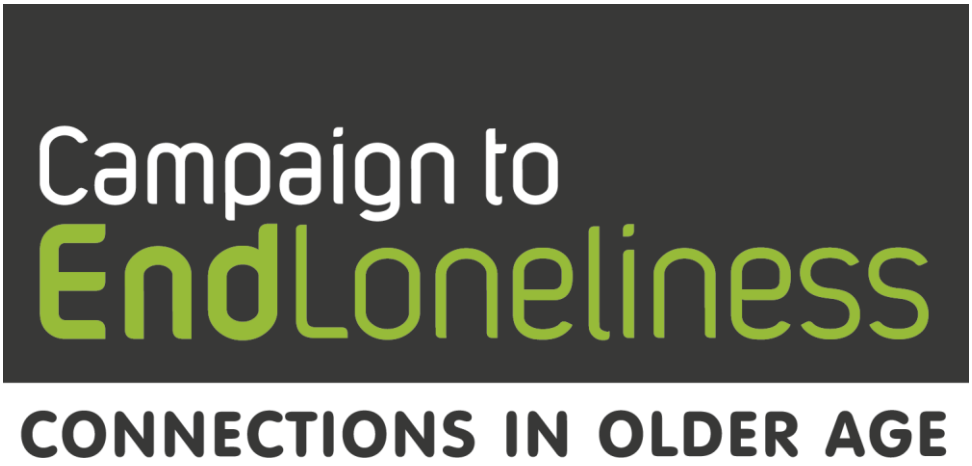

Figure 4 - The Campaign to End Loneliness (reused from Campaign to End Loneliness. 2020. Campaign To End Loneliness | UK Charity |. [online] Available at: <https://www.campaigntoendloneliness.org/> [Accessed 25 June 2020].)

Over the past decade, various campaigns emerged in the UK in order to address loneliness in the older population. An important one is 'The campaign to end loneliness' established in 2011, which works locally and nationally to raise awareness and help individuals feel more connected with others (Cacioppo, 2015). Their strategies involved training front line staff to recognise loneliness and trained volunteers to conduct 'guided conversations' in order find out what the person's specific needs are. They also improved the access to social groups such as cooking classes, walking football and book clubs. The results were extremely positive: people who felt lonely often scored an 88% reduction in their loneliness score and those reporting feeling lonely some of the time showed a reduction of 70% (Mortimer, Age UK 2016). Such movements should therefore be encouraged and further developed throughout the UK to promote the wellbeing of older adults, ultimately protecting many people from depression. Such campaigns will also encourage a culture of caring for others and a greater sense of community which there is an urgent need for (National Institute on Aging, 2019). The 'Five Year Forward View for Mental Health' only briefly mentions loneliness, suggesting a lack of understanding of the strong link between loneliness and depression. It is therefore important to raise awareness of this issue amongst the decision makers of the NHS, in order to integrate interventions to tackle loneliness in mental health strategies. The community sector also needs to recognise the impact of loneliness as there are currently cuts being undertaken, such as closing community centres, libraries and lunch clubs, which is exacerbating the isolation of elderly (Mortimer, Age UK, 2016).

A study based in South Korea investigated which types of social activities were associated with lower rates of depression. They found that being in regular contact with adult children, whether through phone or letters, was strongly linked to a lower risk of depression amongst the elderly. Similarly,

seeing close friends also lowered the rates of depression; but only in women, not in men. Note that other more formal forms of social activities, such as religious activities and volunteering, did not seem to act as a protective factor for depression (Lee and Kim, 2014). Overall, close contact with family and friends is the most important protective social factor for depression, which reflects the need for meaningful relationships to combat loneliness rather than simply increasing social contact. Campaigns promoting a culture of caring for others throughout the population could improve the contact between older adults and their loved ones.

Aside from campaigns, some studies investigated the use of specific interventions to reduce loneliness in older adults. The results of the systematic review by Ruimin et al., (2019) suggested that cognitive modification, social skills training and supported socialisation all have the potential to reduce loneliness. However, the conclusions remained mixed overall, as many of the studies were small and had many limitations. There is therefore a strong need for better quality RCTs with better designed and more theoretical interventions (Ma et al., 2019).

Prevention through Medication

Prophylactic anti-depressants should be considered in patients that are highly susceptible of developing depression. Robinson et al. (2008) conducted a trial using escitalopram, a selective serotonin reuptake inhibitor (SSRI), as prophylaxis for depression in patients who had suffered from a stroke. The incidence of Major Depressive Disorder (MDD) after one year was 25% lower in the intervention group compared to those receiving a placebo. However, after discontinuing escitalopram, the intervention group developed more depressive symptoms after six months compared to the control group. This may suggest the need for lifelong preventative treatment, although more research needs to be done. Similarly, numerous studies looked into preventing MDD induced by interferon-alpha (IFN-alpha) therapy, which is used for cancer treatment and hepatitis. SSRIs were given before starting or as an adjunct to IFN-alpha therapy and successfully reduced the incidence of IFN-induced MDD by about 50% (Okereke et al., 2013). SSRIs can therefore be used to prevent the onset of depression in patients who were recently diagnosed with conditions that are associated with very high incidences of depression, such as strokes and cardiovascular disease.

Nevertheless, there are many problems associated with the use of anti-depressants for purpose of prevention. First of all, these drugs only have limited efficacy in mild depression and it would be difficult to predict the severity of depression in a group of patients identified as high risk based on their condition. Secondly and most importantly, older patients are significantly more susceptible to developing adverse effects from anti-depressants including hyponatraemia and increased risk of

falls. Elderly patients also tend to be on a number of regular medications, thereby making drug interactions with anti-depressants very likely, such as increasing the risk of bleeding when combined with NSAIDs (nice.org.uk, 2020). Therefore, despite the effectiveness of prophylactic treatment with anti-depressants in selected high-risk groups, it may be safer to focus on implementing psycho-social interventions as a wider method of prevention instead.

Alternatively, numerous studies suggest that nutritional supplements such as Vitamin D and Omega-3 are able to reduce depression. Both are safe and cause very little side effects. Vitamin D deficiency is very common in older age and is linked to low mood, as vitamin D receptors are found in limbic regions of the brain, which plays a role in regulating emotions. Omega-3 fatty acids also has beneficial effects in depression and it is believed that this occurs by increasing serotonergic transmission and reducing inflammatory cytokines. Nevertheless, for both nutritional supplements, multiple systematic reviews found mixed results about their role in depression and agreed that evidence was still too weak to be conclusive. This led to the emergence of the large-scale study: VITAL-DEP (VITamin D and OmegA-3 TriaL-Depression Endpoint Prevention), which is currently being carried out (Okereke et al., 2018). If this study is successful in confirming that vitamin D and omega-3 can prevent depression in older adults, then these nutritional supplements should be introduced as a preventative strategy for depression in older adults and vitamin D deficiency should be screened for on a regular basis.

The Role of Screening

The Wilson-Jungner criteria is seen as the gold standard when deciding whether to implement screening programs (Box 1) (Andermann et al., 2008). Screening for depression in older adults ticks many of the boxes and is therefore worth considering. In fact, NICE already recommends screening high-risk patients for depression, including those with a chronic physical condition, using the two screening questions: ‘during the past month, have you often been bothered by feeling down, depressed or hopeless?’ And ‘during the past month, have you often been bothered by having little interest or pleasure in doing things?’. There are many other questionnaires to help identify depression, including the Geriatric Depression Scale (GDS) which has been specifically adapted to older adults, as it takes into consideration that depression may present differently in later life. There is also a screening questionnaire specifically for people suffering from dementia called the Cornell Scale for Depression in Dementia. Screening programs can be considered in a variety of areas within the healthcare system, including the medical wards in hospitals, general practise and care homes.

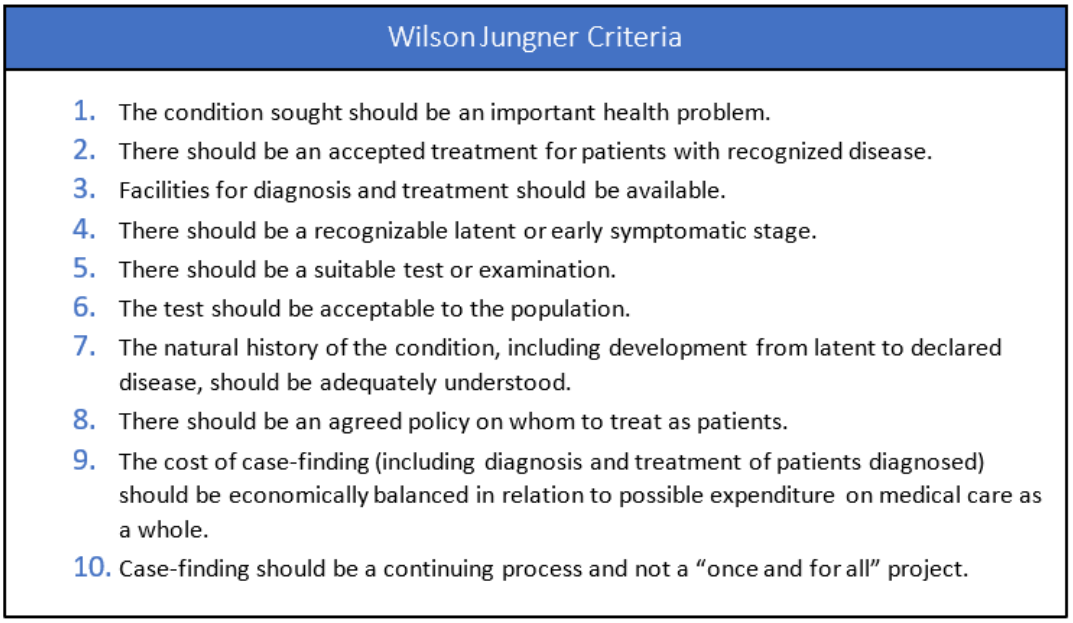

Figure 5 - Wilson Jungner Screening Criteria (adapted from Andermann, A., 2008. Revisting wilson and Jungner in the genomic age: a review of screening criteria over the past 40 years. Bulletin of the World Health Organization, [online] 86(4), pp.317-319)

Screening in Hospital

It is estimated that 29% of inpatients in general hospitals over the age of 65 suffer from depression (Esiwe et al., 2015). Seeing that many patients admitted will have chronic conditions, which is an important risk factor, it seems like a sensible place to screen for depression. Esiwe et al., (2015) studied the effectiveness of the two screening questions and of the GDS-15 in identifying depression in older patients admitted on an acute medical ward. Individually, both screening questionnaires showed adequate detection rates. With a threshold of one or more positive response to the two questions, the sensitivity was 100% and the specificity 71%, and with a threshold of 6 to 7, the GDS-15 gave a sensitivity of 80% and a specificity of 86%. However, they both had a relatively high rate of false-positives with a positive predictive value of 49% and 62% respectively. These values are very important to take into consideration, as it means that almost half of the people tested positive do not have depression but would still have to undergo further mental health assessments. This leads to resources being used unnecessarily and additional work for the already saturated mental health services. Interestingly, the study did find that false-positives could be minimised by using a two-step screening approach, which involved using the two questions first and then the GDS-15. When combined, the sensitivity was 80% and specificity 91%, with a positive predictive value of 71% and

negative predictive value of 94%. This two-step process could therefore be implemented on medical wards to act as a screening tool for depression in inpatients above the age of 65.

Screening in Care Homes

Around four in ten people living in nursing homes in England suffer from depression, which is three to five times higher than in older adults living in the community (British Geriatrics Society, 2018). It is not a surprising figure considering that these people quite abruptly find themselves in an institutionalised environment after having to leave behind their home and losing their independence. It impacts their social life as they may not be able to see friends as frequently or spend time doing their hobbies. A small American study of a care home found that of the residents displaying symptoms of depression, 40% did not get identified and consequently received no treatment (Crogan and Evans, 2008). This is a significant proportion of residents to be left without treatment, thus showing the need to improve the identification of depression in this setting. Eisses et al. (2005) and Davison et al. (2013) both found that training staff to use screening tools was successful in improving referrals to mental health services (British Geriatrics Society, 2018). Both the two-questions screening tool and the GDS-15 are easy to use and require minimal training. All healthcare workers in care homes, including healthcare assistants and agency staff, should therefore be familiar with it, with the goal of increasing screening for depression in residents. Furthermore, a study based in the United States designed a Promoting Positive Well-Being program to help nursing home staff identify earlier and manage depression in residents better. This included the PHQ9 as a screening tool for depression, along with behavioural and social interventions to then manage the symptoms. Two thirds of the participants reported improvements and 42% went from a positive initial screen to a negative one. These results therefore show that by combining the use of screening tools and interventions, depression can be successfully managed in care home residents.

Screening in Primary Care

In the community, around 10-15% of adults aged over 65 suffer from depression, but this is commonly missed in primary care (Conwell, van Orden and Caine, 2012). Considering the time pressure in GP practises, it would not be feasible to screen everyone, which is why NICE suggests using the two-questions screening for depression in elderly with high-risk features, such as a history of depression, chronic physical illness leading to disability and other mental health problems including dementia. Similarly, a study by Hilderink et al. (2009) suggested routine screening for mental health issues in older patients presenting to their doctor with Medically Unexplained Symptoms (MUS), as they found that 56% of their participants with MUS had depression, and 31%

had anxiety. MUS is also more prevalent in older adults costs the UK over £3.1 billion per year (Age UK, 2016). By implementing the two-question screen in patients presenting to primary care with significant risk factors such as multiple co-morbidities or MUS, depression could be identified earlier and a treatment plan can be implemented sooner.

Considerations

Although screening programs would allow earlier identification of depression in older adults, it remains a criticised topic. There are arguments to focus resources on improving the identification of depressive symptoms or preventing the onset of the condition, rather than implementing a screening program. Screening carries the risk of subjecting those who are false positive to unnecessary further investigation, in this context, a mental health assessment lead by a specialist. Mental Health services for elderly are already underfunded and the limited resources should therefore be prioritised for those patients who need it more urgently. In primary care, it may be more efficient to improve the identification of depression in later lifer, however in care homes and hospital wards, screening should be implemented due to the high prevalence of depression.

Conclusion

Depression in older adults is a serious public health crisis. It has a significant impact on the person's quality of life and wellbeing and is associated with a higher morbidity and mortality. According to WHO, major depressive disorder will be the leading cause of disease burden in developed countries by 2030. Seeing that the population will continue ageing over the next decades, depression in later life will only become more prominent, unless serious changes are implemented. This will require the co-operation of the government, the NHS and its workers, community and voluntary sectors and campaigns. There is the need to raise awareness throughout the healthcare system about depression in later life, in order to provide better support for older patients. It should aim to reduce age discrimination throughout the system, from inequality in funding to prejudices amongst healthcare workers. Campaigns must to continue to work towards improving mental health literacy in older adults to increase their use of mental health services. Prevention interventions targeting high-risk individuals should be an important public health strategy, whether psychological, social or medical, with the aim of lowering the incidence of depression in later life. It is a cost-effective approach to relieving the disease burden on the healthcare system. Implementing screening programs in hospitals and care homes can improve early identification and early intervention. Overall, depression in older adults is currently under-identified, under-treated and underestimated, and therefore needs to be addressed urgently.

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