

# Risk factors for depression in the elderly



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## Introduction

Australian bureau of statistics (2016) data mentions that, 15% of the Australian population comprises of the people who are aged 65 years and above. Enabling these senior citizens to continue to live well as long as possible is the primary societal goal of ageing (Kendig, Browning, Thomas & Wells, 2014). However, healthy ageing is not always possible, as there are several physiological and psychosocial factors which impedes the normal healthy ageing process. Psychological factors such as depression is found to have a significant impact on the quality of life and well-being among the elderly population (Singh & Misra, 2009). In a study done in an Australian setting by Pirkis et al., (2009) found the community prevalence of depression to be 8. 2% among people aged 60 years and according to the Australian institute of health and welfare (AIHW) (2012) the prevalence rate was as high as 52% among the aged care residents.

### Biopsychosocial framework of depression

Opposed to the narrow focus of the reductionist biomedical model; a need of more holistic biopsychosocial framework was emphasised by Georg Engel in his seminal article “ The need for a new medical model” in 1977 (Havelka, Lucanin & Lucanin, 2009).

With regards to bio-medical model of depression there is not a single, unified pathophysiological mechanism which can satisfactorily explain its aetiology (Patten, 2015), The research in the biological aspect of the biopsychosocial framework of depression comprises several theories including altered serotonergic, dopaminergic, noradrenergic, and glutamatergic systems,

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inflammation, HPA axis abnormalities, vascular changes, neuroplasticity and decreased neurogenesis (Dean & Keshavan, 2017). However, the most widely researched serotonin hypothesis, which is now almost 55 years old, is now not tenable as it was before (Albert, Benkelfat, & Descarries 2012; Cowen & Browning 2015). With an advent of new and emerging neuro imaging techniques and a broader understanding of the interplay between biopsychosocial variables in the causation of depression, a more holistic understanding has been developed; some neurological studies have found the involvement of brain areas of medial prefrontal cortex (mPFC) to be associated with emotional regulation/ decision making, social cognition and self-reference and these areas have been implicated in development of depression (Bzdok et al., 2013; Eickhoff, Laird, Fox, & Hensel 2016). Also, Booth et al., (2015); Conway, Raposa, Hammen & Brennan (2018) in their reviews found that high levels of adverse events in early-life impacted personality, attachment, core beliefs and coping tendencies, ultimately leading to changes in autonomic, endocrine, and immunological processes, which increased vulnerability to depression. Data stemming from community, epidemiological and clinical studies have shown several chronic conditions such as cardiovascular disease (CVD), diabetes, hypertension, hypercholesterolaemia, smoking and obesity to be a risk factor for the late on-set of depression and vice-versa (Naismith, Norrie, Mowszowski & Hickie, 2012).

Regarding the psychosocial domains, there are different psychosocial predictors across the life span; Erikson (1985) in his seminal work '*The Life cycle completed: A review*', divided human life span into 8 psychosocial

developmental stages, in which the personality attributes of the old age (65+) is characterised by 'Integrity versus despair'. In his model, he argues that the old aged adults in their later stages of life must come to an even term with their past and need to find a meaningful purpose to their life in face of an imminent demise. Dezutter, Wiesmann, Apers & Luyckx (2013) in their cross sectional study among 100 males put Erikson's theory of 'Integrity versus despair' into test and found that, successful ageing was determined by ability to cope and accept the world as meaningful, manageable and comprehensible, while easily accepting their past life, including the limitations and failures, which would result in 'ego integrity'. However, failure to achieve such amicable resolution often resulted in despair, regret and depression. There are several other psychosocial factors which are associated with depression in an old age; a research done in an Australian setting by Davison, McCabe, Knight & Mellor (2012) among 100 aged care residents found that psychosocial variables were more prominent in understanding depression rather than traditional risk factors such as disability and medical illnesses. In their study; they found three unique predictors among both male and female residents, which acted as a buffer or a protective factor against depression, those predictors were environmental mastery, purpose in life and autonomy. In their study, environmental mastery was an important predictor and had a negative correlation with depression ( $r = -0.70$ ,  $p < .001$ ), environmental mastery represented an ability to compete and manage or change the environment by controlling outcomes and making the context suitable to one's needs, this sense of control provided a protective effect against depression. In another recent study by Laird, Krause, Funes & Lavretsky (2019) they found that personal

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attributes such as attachment styles, temperament and personality each predict a risk factor for depression. Also, insecure attachment was associated as a risk factor for depression in the later life. Social isolation and loneliness were also identified as another risk factors for depression (Courtin & Knapp, 2015).

### Spectrum of changes

Mood: Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5) (5th ed.; DSM-5; American Psychiatric Association, 2013) requires the “ presence of either sadness or anhedonia with a total of five or more symptoms over a 2-week period”. However, among older adults with depression, low mood might be less common when compared with younger cohort with depression, whereas anxiety, irritability and other somatic complaints could be more prominent (Taylor, 2014).

Cognition: Cognitive decline may be a result of Depression which could be both a manifestation of and/or the risk factor. Framingham heart study found that depression was associated with dementia (Saczynski, 2010). Deficit in cognitive patterns could be a sign of an accelerated brain ageing which perpetuates and confers a predisposition to depression, the biological explanation for this is termed as ‘ disconnection hypothesis’ where focal vascular damage and white matter lesion is considered a crucial factor which influences neural connectivity and contributes to clinical symptoms (Taylor, Aizenstein & Alexopoulos, 2013). This biological deficit can affect the psychosocial well-being of the individual.

Changes in physical functioning: An analysis of longitudinal cohort study by Van Milligen et al., (2011) found that women with late age onset of depressive or anxiety disorders had significantly poorer physical function in both weaker grip strength and pulmonary function when compared with healthy controls.

Psychosomatic complaints: In a study done by Chakraborty, Avasthi, Kumar & Grover (2012) among clients diagnosed with depression, they found that the most common functional somatic complaints reported as “ a lack of energy (98%) and feeling tiredness when not-working (82%)”. Psychosomatic complaints have both physical and psychosocial implications.

### Approach

Elderly clients are more prone to the side effects of the anti-depressant medications (Aroll et al., 2009; Kennedy, 2013). Hence, psychotherapies like Cognitive behaviour therapy (CBT) can be used to provide the skills to the individuals to change their thought pattern without any physical side effect (Jayasekara et al., 2013). The use and efficacy of CBT is one of the most widely studied in the geriatric population (Bogner, Cahill, Frauenhoffer & Barg, 2009; Hofmann, Asnaani, Vonk, Sawyer & Fang, 2012). CBT refers to a type of psychotherapeutic interventions based on a premise that mental health issues and psychological/emotional distress are caused by maladaptive cognitive factors. The core foundation of this therapy was pioneered by Aron T. Beck in 1970 (Dobson, 2013; Eifert & Plaud, 1993). The core CBT techniques is taught over several sessions, it includes cognitive restructuring, where an irrational thought is replaced by more rational and

accurate thoughts, behavioural activation, where a daily goal is set, directly addressing the core mood symptoms (example, sadness and guilt) and improving the negative self-views, (example, having positive attitudes about self) (Dobkin, Mann, Interian, Gara & Menza, 2019)

Effectiveness:

A prospective randomised controlled trial (RCT) done among elderly adults diagnosed with depression found that, after 12 weeks of intervention with CBT; there was a significant decrease in depression ( $p = 0.009$ ) than that of the control group (Huang, Liu, Tsai, Chin & Wong, 2015). In another RCT by Dobkin et al, 2019 done among patient with two co-morbid conditions, Parkinson's disease and depression found that CBT improved symptoms of depression such as "negative attitudes toward self ( $P < 0.01$ ), performance impairment ( $P < 0.01$ ) and somatic symptoms ( $P < 0.01$ )", however, the main limitation of this study was, it comprised the cases (54%) who were taking anti-depression medications and thus the independent efficacy of the CBT could not be evaluated. Another RCT done in an Australian setting by Wuthrich & Rapee (2013) among the community dwelling elderly population found that CBT was effective in improving the symptoms of both depression and anxiety, this study comprised of 62 people (CBT group = 27 and non-CBT = 35); 52% of the treatment group showed recovery and improvement of their primary clinical problem compared to 11% of the non-CBT group; the recovery was maintained three months later. CBT can also be provided by trained nurses; in a study by Tanoue et al., (2018), they found that 6 weeks of nurse-led CBT sessions significantly reduced the severity of depressive disorder, the score in Beck's depression inventory-II improved from 23.1 (SD

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= 7.56) prior to the treatment to 12.4 (SD = 8.57) after treatment, 45% of the participants were found to have responded to the treatment, while 34% met the remission criteria.

While having several benefits, CBT also has some drawbacks. CBT is a structured method which can be delivered in an individual session or as a group therapy session, in a study done by Söchting, O'Neal, Third, Rogers, & Ogradniczuk (2013) among elderly clients, they found that, some participants who are from the culture where expressing emotions are encouraged and where they are motivated to learn more about themselves and their condition, rather than following didactic instructions, might not find CBT to be much helpful as it contains didactic instructions and home-based exercises which they might not find convenient. Another study done on efficacy of CBT in a cross-cultural setting (among Aboriginal Australians) found that clinician's cultural competence is very important while delivering CBT and the study emphasised on the necessity of longer-term therapeutic involvement while working with complex trauma cases (Bennett-Levy, 2014). Also, there is not enough scientific burden of proof of effectiveness of CBT in individuals with communication deficits as CBT delivery relies in the usage of language (Bhaumik, Gangadharan, Hiremath & Russell, 2011) As CBT was developed in the western cultural context; its efficacy could be questionable in culturally and linguistically diverse group (CALD), hence culturally adapted and validated version of the therapy should be used while working with the client from CALD group (Hinton & Patel, 2017).

Nursing Practice:



Nurses work very close to the patients and spend a lot of time with the patients while assessing, monitoring, caring and supporting them. The therapeutic relationship of Nurse-patient interaction is very important for good therapeutic outcome; especially in the mental health settings. Elderly patients (especially those residing in nursing home and diagnosed with depression) are in general vulnerable and the nurse-patient interaction and the nurse-patient relationship is integral to their experience of self-respect, dignity, sense of well-being and self-worth (Harrefors, Savenstedt & Axelsson, 2009). Many people with lived experiences are deprived of their right to equal treatment in the society. This discrimination is not limited to the community, rather it is rampant in the mental health service, where they are the consumer of those services (Saxena & Hanna, 2015). Nurses practicing in the general and mental health setting have a responsibility and are in a position to put an end to any form or nature of discrimination. Also, nurses often are in contact with the family members of their clients; they can work towards enlisting the family's support (with client's permission), as family members are a crucial dimension for management of depression and doing this can also be very helpful in overcoming the stigma associated with depression within the family (Apesoa-Varano, 2010).

#### Conclusion:

Depression among elderly cohort is a comorbid risk factor for several other psychological conditions such as anxiety and other physical conditions such as cancer, stroke and acute coronary syndromes. Despite wide avenues in pharmacological treatment, the adverse effects of some of these drugs might outweigh its benefit for the elderly population. Thus, psychotherapies

like CBT, which can be delivered by nurses after an adequate training should be promoted by the concerned authorities. Nurses have an integral role to play in facilitating patient comfort, putting an end to stigma in community/health care settings and providing psychoeducation to both the carers and the elderly clients.

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