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REVIEW

Geriatric Depression: Concepts and Risk Factors. A literature review.

Belén Rivera-Corvalán.[1]

ABSTRACT

The population increase of the elderly in Chile, as well as worldwide, has caused the appearance of phenomena specific to older adulthood, including Geriatric Depression. The aim of this review is to describe the main concepts and risk factors of Geriatric Depression. This review is structured in three main sections: "Older adulthood", "Geriatric Depression", and "Factors associated with Geriatric Depression", the latter is subdivided into "Psychosocial Components" and "Physical Components". Finally, in the discussion it is highlighted that for future investigations, as well as for professionals, it is key to include an approach to older adulthood as a complex evolutionary cycle that is in a constant relationship with its social context.

Keywords: *geriatric depression, elderly, risk factor.*

Affiliation:
[1]Fundación Kimntrum, Chile.

Corresponding:
Belén Rivera-Corvalán. Fundación Kimntrum, Beltrán Mathieu 7, Concepción, Chile. Fono: +56996796481. E-mail: belenriveracorvalan@gmail.com.

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INTRODUCTION

Population aging has been one of the most distinctive phenomena of the XX century *(Patil et al., 2015)*. The increase of the elderly population, people aged 60 and above, has gained significance due to its sustained growth worldwide year after year *(UN, 2017)*.

Therefore, it is urgent to observe the differential features of this population and identify possible elements that deteriorate ageing's appropriate development. Within this need, it is crucial to start examining the high prevalence of Geriatric Depression *(GD)* in older adulthood, which arises as one of the main causes of disability in the elderly. By 2020, Depression is expected to become the second-leading cause of disability after cardiovascular disease *(Kennedy, 2015; Mahmoud et al., 2016)*.

The biggest issue of the previously described situation is not only the lack of treatment or staff trained in GD management, but also the lack of information regarding criteria and risk factors for the development of Depression in an elderly population *(Kennedy, 2015; Mahmoud, et al., 2016)*. Some of the elements associated with this are: poor schooling; lack of social support; loss of autonomy; loneliness; being female; among others. The clear and early recognition of these components might be an effective tool for prevention strategies, thus diminishing the incidence of this phenomenon in older adulthood.

According to this, the following review seeks to describe the key concepts and risk factors of Depression in older adulthood, also known as GD or Late-Life Depression *(Chang et al., 2016)*.

This review is structured in three main sections. The first one is about "Older adulthood", the second one is about "Geriatric Depression", and the third one contains the risk factors. The review ends with a brief Discussion about the described concepts and factors, as well as their implication in clinical practice and research.

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OLDER ADULTHOOD

Perspectives and construction of Older Adulthood

Since the 90s, new theories and studies linked to the life-cycle perspective appeared, which considers old age as another stage of the human experience and not as a mere evolutionary stage of decay. This helps to overcome social prejudices and negative attitudes towards ageing *(Villanueva, 2009)*.

Older adulthood is an evolutionary cycle and, at the same time, a social construct linked to the assignment of age ranges for men and women from the age of 60 onwards. Additionally, it is a process that involves an accumulation of subjective experiences throughout life *(Salgado-de & Wong, 2007)*, thus intertwining a biological and a psychosocial perspective in its comprehension *(Muñoz, 2003)*. Because of this, it is important to consider older adulthood as a complex phenomenon, which is constantly influenced by different sociocultural factors, as well as subject-related factors *(Cardona et al., 2009)*.

Worldwide Demography of Older Adulthood

According to data from 2017's "World Population Prospects", the number of older adults is expected to double by 2050 and triple by 2100. This means that it will go from 962 million in 2017 to 2100 million by 2050, and 3100 million by 2100. Therefore, globally, this population group is the fastest growing one, overtaking child population. This would help to create a new social phenomenon: the so-called inverted social pyramid between subjects that are born and die every year *(UN, 2017)*.

This population ageing is due to three interrelated factors (a) fertility, (b) mortality and (c) migration. On the one hand, fertility might be subject to the continuous decrease in birth rate, which is the main renovation mechanism in the population structure *(Ministerio de Planificación y SENAMA, 2009)*. A second factor is the low mortality rate, which is on its own related to the current improvements in health care and life conditions, thus having a direct impact on life expectancy, including the probability of living beyond 80 years of age *(Ministerio de Planificación y SENAMA, 2009)*. Finally, migrations might have an influence on the configuration of this new age structure, where younger population tends to migrate from the country to the city, thus increasing the concentration of older adults in rural areas *(Sánchez, 2015)*.

Demography of Older Adulthood in Chile

In Chile, the population panorama presents characteristics that are similar to what occurs worldwide. According to the CASEN survey *(2015)*, 28,2% of the total population is estimated to be in the third, or fourth, age by 2050, in contrast with only 10,2% reported in the year 2000. The same survey points out that 3.075.603 people in our country are older adults, most of them being female with 57,3%.

Population ageing influences all aspects of life, as well as all systems around it: family, economy, health services, work, and social services. The latter are being forced to respond to these new transformation and population needs *(Peláez, 2005)*. Considering this, along with the multidimensional complexity of older adulthood, the factors that arise within this phase need to be observed. These factors or fragile and highly prevalent elements demand adequate measures and courses of action for the establishment of principles of equity and well-being in the elderly population *(Peláez, 2005)*.

GERIATRIC DEPRESSION

To live longer is not related to increased levels of well-being; older adults are one of the most socially vulnerable groups. This has an effect mainly on the high prevalence of diseases linked to mental health, which is higher in the case of women *(WHO, 2011)*.

Depression is one of the most important geriatric syndromes that affect the population of older adults worldwide. According to the *WHO (2011)*, the manifestation of depressive episodes in older adults ranges from 30% to 70%, with reports that indicate that by 2020, depression will be the second-leading cause of morbidity and mortality in the elderly population *(WHO, 2011)*.

According to United States' National Institute of Mental Health *(NIMH)*, approximately 15% of people over 65 years old has had at least one episode of depression with a tendency to chronicity of symptoms if not properly treated. In a cross-sectional study carried out by *Campos et al. (2004)* the manifestation of depression among elderly patients was registered through the Geriatric Depression Scale *(GDS)* by Sheikh and Yesavage, revealing the presence of symptomatology of moderate to severe depression on 60,3% of the institutionalized patients and on 77,5% of outpatients.

Despite depression is the most frequent affective disorder among older adults, this tends to be concealed, since it is assumed as a normal process of ageing, or a manifestation of hypochondria. In addition to this, it is confused with the symptoms of chronic diseases, the possible cognitive decline, multimorbidity present at this age, or cultural factors that overshadow this phenomenon within family or health systems. As a result, GDis underdiagnosed in the elderly, thus hindering the priority of medical attention or interventions from the psychosocial sphere *(Fischer et al., 2003)*.

In order to create an understanding for GD, it is necessary to briefly approach what is understood as depression and which are the current diagnostic criteria. It must be noticed that these are mostly established in studies on young population, and then adjusted to different age populations (*Llanes et al., 2015)*.

Within the spectrum of Depressive Disorders described in the DSM-5 *(2013)* are disorders of: (a) Disruptive mood dysregulation disorder, (b) Depressive disorder *(including major depressive episode)*, (c) Persistent depressive disorder *(dysthymia)*, (d) Premenstrual dysphoric disorder, (e) Substance/medication-induced depressive disorder, (f) Depressive disorder due to another medical condition, and (g) Unspecified depressive disorder. The general characteristic of all of these disorders is the presence of sad, empty, or irritable moods, also accompanied by somatic and cognitive changes that affect the individual's functionality. They also differ in length, time or supposed etiology.

For this review, it is worth mentioning two of the most classic conditions present in the general population; one of them is the Major depressive disorder, which is characterized by discrete episodes of at least 2 weeks in length or more, with remissions in between each episode. The second one is a more chronic form of depression, named Persistent depressive disorder *(dysthymia)*, which might be diagnosed when the alteration of mood lasts at least 2 years in adults *(DSM-5, 2013)*.

While it is previously mentioned that the current existing criteria are adjusted to the general population, there are indeed differences between the young and the elderly population. Instruments such as the GDS allow exploring the specificity of the cognitive symptoms of Major Depression in elderly population. Reports show that they present more complaints regarding the difficulties in memory and concentration, in comparison with young population *(Gomez-Angulo & Campo-Arias, 2011)*.

However, the differences are not only in the manifestation of diagnosis and criteria for older adulthood; there are also specific risk factors associated with GD, which will be described next.

FACTORS ASSOCIATED WITH GERIATRIC DEPRESSION

In order to have a much clearer understanding of the risk factors for GD, these will be subdivided in two interrelated areas. The first one is risk factors associated with: "Psychosocial Components". The second group of factors is related with "Physical Components", or physical transformations experienced towards old age.

Psychosocial Components

The first associated risk factor is gender, specifically being female *(Sánchez et al., 2012)*. This might be due to a higher economic inequality with respect to the male population, to the fact of having more family responsibilities, or to the higher probability of being widowed. The latter constitutes the "feminization" of ageing, which means that in average women live longer than men, thus facilitating the negative conditions of living alone, such as dependency on others or difficulty of social participation *(Chang, et al., 2016; Salgado-de & Wong, 2007; Salazar et al., 2015; Torres et al., 2015)*.

A second risk factor associated with this phenomenon is the schooling level. Older people that didn't have access to formal education develop elements linked to poverty, such as lack of housing, social protection or inadequate health services. This information can be observed in the last Survey on Quality of Life in Old Age *(Universidad Católica de Chile, 2017)*, in which the depressive symptoms obtained in the Yesavage scale are related with a basic or lower schooling level, unlike those people with a higher schooling level, who ranked higher in almost all the elements of the survey.

The lack of social support is the third associated risk factor. *Castellano (2014)* claims that the support from friends, as well as family members, are the two main sources of social support in old age, and that the lack of these constitutes a risk factor. In addition to this, *Segura et al. (2012)* establish that little or none participation in community activities, as well as the absence of social support networks, also constitute risk factors. This is due to the loss of continuous integrative and mental abilities, which become rigid due to isolation, low self-esteem and feeling of loneliness *(Sánchez et al., 2012)*.

The fourth factor is the perception of loneliness, which goes beyond physical loneliness as such. Both modalities have an impact on the lack of social bonds or isolation of the elderly. The study conducted by *Alpass & Neville (2003)* aimed at establishing the relation among loneliness, social support, depression and physical health on 217 male older adults. They found a significant relation between depression and loneliness.

Additionally, the perception of loneliness in older adults is related with the evaluation of the ageing process, which is mostly negative. *Acosta et al. (2017)* assessed the independent effect of loneliness, presence or absence of diseases, presence or absence of couple and living alone or with others as predictors of depression and quality of life. They found that negative perceptions towards old age, along with the perception of social and family loneliness, are the dimensions that mainly explain the symptoms of depression.

A fifth associated factor is the increased presence of mourning in older adulthood, understood from multiple perspectives. A first form of mourning are the deaths of family members and friends, which is manifested as an inevitable consequence of old age. A second form of mourning are the transformations of the previously played roles, with retirement as the most representative case. Lastly, the mourning related to the transformation of the own body, described in the next section *(Kennedy, 2015)*.

Physical Components

The manifestation or the development of the Locomotive Syndrome *(LS)* becomes the sixth associated factor. This refers to the condition of people that require care services due to locomotion problems. The comparative study carried out by *Nakamura et al. (2017)* revealed that those who had LS problems were more likely to develop depression.

A seventh risk factor is dependency or lack of autonomy in older adults. This is due to the gradual loss of physical control, associated to difficulties in the motor, visual, hearing and mental areas *(Urbina et al., 2007)*. As a result, the elderly must depend on others, which eventually generates depressive symptoms like frustration or vulnerability *(Campos et al., 2004)*.

The cognitive decline constitutes the eighth factor, in which certain specific relations between brain areas that are directly related to the development of GD. According to *Spyrou et al. (2016)*, synchronization between the right frontal lobe and the frontal and anterior midline would be two interrelated zones that might trigger the risk of depressive symptoms. Nevertheless, it is unclear whether GD derives from the cognitive decline in older adulthood or vice versa *(Dillon et al., 2014)*.

A ninth associated factor is the high prevalence of Visual Impairment *(VI)*. In the results of a systematic review of databases *(LILACS, SciELO, MEDLINE and Cochrane Central Register of Controlled Trials)* carried out by *Ribeiro et al. (2015)*, they found that in all the analyzed studies there is a relation between the development of GD and VI. In addition to this, they proved that this is the third most frequent physical deterioration in the elderly population, thus contributing to the isolation of these people in their social context.

The trajectory and history of clinical Depression, personal or family background, constitutes the tenth and last risk factor associated with physical components. The results of the study by *Mahmoud et al. (2016)* revealed that GD is related to individual or family background, such as the number of hospital admissions, the use of prescribed medication and the manifestation of certain physical diseases *(Bradley et al., 2016)*.

DISCUSSION

The continuous increase in older adult population underlines more clearly some elements related to the complexity of such a particular evolutionary cycle as older adulthood *(WHO, 2011)*. A clear example of this is GD, which manifests its complexity in its relation between normative elements of ageing and the typical characteristics of the environment that surrounds each subject.

One of the most relevant elements, either as protective or risk factor, is social life in the configuration or manifestation of the GD phenomenon. As described by *Carmona (2015)*, social life is one of the most influential elements in the quality of persona well-being. The reason for this is that it fulfills three fundamental needs of the human being: the need for inclusion, control and affection. The first one is related to the tendency to search for communication or contact chances. The need for control arises from the search for safety, either for oneself or for the rest. Lastly, the need for affection is related to the development of intimate interpersonal bonds.

If we observe the risk factors for GD, it is possible to infer a bidirectionality of influence. These risk factors have a negative influence in the three social functions described by *Carmona (2015)*. On the one hand, the need for inclusion would be affected because of the lack of social support or less participation in social and work activities. Another element is the manifestation of certain disabilities and, therefore, the loss of autonomy, which have a negative impact on the need for control or safety, since the subjects would develop feelings related to vulnerability. Finally, the need for affection would also be affected in normative situations of death of close relatives or friends, which reduces the size of the established bonds *(Carmona, 2015)*.

Therefore, one of the ideas derived from this is that there is a close relationship between physical and psychosocial factors and the environment's morphology. It is also inferred that within this environment there are subsystems that would help to relieve the manifestation of depression in older adulthood. One of this relational subsystems are agents, either professionals, family or close friends, who would focus their work and affective actions on the elderly population suffering from Depression.

There are, however, different challenges in the practice of prevention or treatment. One of them is the reductionist view about the older adult as a passive subject in its development. On the contrary, older adulthood constitutes itself as a complex cycle, in which the interrelation of multiple elements must be a key feature for its understanding.

An example of this is what occurs with de “mourning” factor in its associations with depression. This is not only related to physical components but also to elements of loss of roles or death of family members or close friends *(Cardona et al., 2009)*.

This is a challenge for all subjects that seek to understand older adulthood, as well as for the interventions in favor of the inclusion of the growing population of older adults. Such interventions must consider trustworthy and continuous educational mechanisms related to the possibilities of the own community.

On the other hand, it is necessary to consider the risk factors described in this review, so that the future interventions are more effective in the prevention and treatment of GD, as well as in the development of lines of research associated to this phenomenon *(D’souza et al., 2015)*.

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