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Research Article

The role of depressive symptoms in successful aging in older adults

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Abstract

Background: Depressive symptomatology is a prevalent and disabling condition in older adults, considered as a public health problem due to its devastating consequences reducing the chances to successfully age. The objective of this study is to analyze the role of depressive symptomatology as risk factor for successful aging in older adults.

Methods: Cross-sectional study, participants n=401 community-dwelling older adults 60 years and older previous informed consent. Depressive symptomatology was assessed with the Geriatric Depression Scale, and Successful aging according to Rowe and Kahn criteria. Risk analyses crude and adjusted were performed.

Results: Depressive symptomatology was reported by 27.2% of the participants, only 11% met the criteria for successful aging. Depressive symptoms referring anhedonia were significant as risk factors for successful aging: drooped many activities and interests (OR=5.58), feelings of emptiness in life (OR= 2.43), often getting bored (OR=3.52) and preferring to stay home rather than going out and doing new things (OR=3.95). Symptoms of depressed mood were also related significantly to successful aging, feeling helpless (OR=2.79) and feeling in a hopeless situation (OR=4.15). Also was related the symptom of fatigue (OR=3.12) and the afraid that something bad happens (2.08). OR adjusted were only significant for anhedonia symptoms: drooped many activities and interests, preferring to stay home rather than going out and doing new things, and their interaction.

Conclusions: In this study we went deeper to identify specific depressive symptomatology and found that most significant depressive symptoms associated with successful aging were those involving anhedonia. It is necessary to diagnose and provide a treatment to prevent the negative consequences of depression in older adults, hence, promoting better chances for aging successfully.

Introduction

Depression is the most common mental disorder in old age, major depression affects approximately 5% of the world´s older population [1]. However, reportedly around 30% of older adults have clinically significant symptoms, even in the absence of major depression [2].

In older adults, depression has a particular presentation, is less likely to endorse affective-cognitive symptoms and more likely to display somatic symptoms, fatigue, loss of interest in living and hopelessness about the future than in younger adults [3]. Sociodemographic conditions like being women, single, and lower education, and housewife have been reported as risk factors to depression; besides health conditions, number of diseases, disability in basic and instrumental activities of daily living and cognitive impairment [2]. Additionally, comorbid physical illness, poor social support, and bereavement are also known to increase risk of depression in older adults [4].

Although depression is less frequent among older adults than among younger adults, consequences in the older adults are devastating. Depression is associated with more functional and cognitive impairment [4], an increased prevalence and incidence of frailty [5] and poorer quality of life [6], increased risk of suicide, morbidity, and greater self-neglect [3]. Even more, depression is linked to the onset of dementia [6]. All this are in turn associated with increased mortality. In this sense,

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impact of depression on the old age carries significant costs for the person, the family and the health services [4]. Thus, depression interferes with the possibility to age in the better way, free of disability and with optimal opportunities of health, safety and participation. In this sense, depression comprises the possibility of successful aging.

The successful aging implies a positive vision of aging and is considered a key concept allowing people to realize their own potential and living their own aging as a positive experience. Rowe & Kahn [8] define successful aging as the low probability of suffering from illness and disability, high physical and cognitive functioning, and life engagement. The prevalence of successful aging has been estimated in different countries, European countries ranged from 3% to 21% (average 8.5%) [9], is US population has been estimated in 10.9% [10], and 12.5% in Mexico [11]. A review including 115 studies around the world reported in average 28.3% of successful aging [12]. In addition, some factors have been reported as associated to successful aging, including age, income, education, gender, cognitive performance, functional status, lifestyle behaviour, biomedical markers, wellbeing, life satisfaction, attitudes to aging, social network, and depression [13].

Currently, emotional and psychological aspects and its role on successful aging have not received as much attention. Given the potential impact of depressive symptoms on domains of successful aging, this study focuses on the role of specific symptoms of depression and its association to successful aging. Then, the objective of this study is to analyze the role of depressive symptomatology as risk factor for successful aging in older adults.

Method

A cross-sectional study was designed including persons 60 years of age and older community-dwelling in Metropolitan Area in Guadalajara (Jalisco, Mexico). A total of 401 older adults were included in a proportional and randomized sample. Basic Geostatistical Areas (AGEB) were used to carry the survey out, they were chosen randomly as well as blocks and homes until finding the study subject. Face to face interviews were carried out by trained students of gerontology.

Participants

Older adults were eligible if they were 60 years and older, wanted to participate signing an informed consent, and were able to respond by themselves. A total of n=401 participants were included in the study, mean age 72.5±8.11 years old (range 60 – 95), mean years of education 6.9±5.2, women 59.4% (n=238), married 49.4%, single 11.2%, widow/er 31.7%.

Measures

Depressive symptoms were assessed by the Geriatric Depression Scale (GDS) [14], the15 items version is a widely used self-report measure designed to assess and screen depression in older adults. All items are dichotomous (yes/no), and highly correlate with depressive symptoms in validation studies [15]. Cut-oof point for depression is 5/6. Items were classified depending on the main depressive symptoms they measured according to The Diagnostic and Statistical Manual of Mental Disorders 5th Ed. [16]: A) depressed mood, B) anhedonia, C) fatigue, D) cognitive symptoms, E) worthless or guilt, F) death thoughts (Table 1).

Successful aging was measured based on the Rowe & Kahn´s model and operationalized according to Strawbridge, et. al. [17] and McLaughlin, et al. [10] studies, considering five indicators for successful aging:

1) no important disease, respondents could not have any of 5 chronic diseases (cancer, chronic lung disease, diabetes, heart disease and stroke.

2) no disability in daily life activities, participants who reported no difficulty performing activities of daily living (AIVD) measured by Lawton & Brody scale [18] met the criterion of no disability.

3) high physical functioning, no more than one difficulty of seven measures of physical functioning (walking one block, walking several blocks, climbing up one floor of stairs, climbing several floors of stairs, lifting or carrying items weighing more than ten pounds, stooping kneeling or squatting, and pulling or pushing big objects) was classified as successful aging.

4) cognitive functioning, measured Mini-Mental State Examination [19] with cut-off points standardized by age, sex, and education [20].

5) life engagement, defined by the participation in social activities, if the participant reported doing any paid work during the last week, or any volunteer work, family, home or selling by their own. Additionally, to report being married o living with a couple, relative or friend, and attending often to religious celebrations.

Participants must meet the five criteria to be classified as successful aging.

Data analyzes

Data were analyzed in IBM SPSS Statistics Version 24.0. Prevalence of depression and successful aging were calculated, then specifically the presence of each depressive symptom was identified. To determine if each depressive symptom was statistically associated to successful aging was performed a risk analyses to obtain Odds Ratio (OR) and 95% Confidence Intervals (CI 95%). Binary logistic regression model tested the relative contributions of depressive symptoms to successful aging, plus interactions between them.

Results

Depressive symptomatology was observed in 27.7% of the participants, mean of symptoms reported was 4.12±2.91, most common symptoms (Table 1) were related with anhedonia (preferring to stay home rather than going out and doing new things 43.6%, and drooped many activities and interests 38.4%), afraid that something bad happens was referred by

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Table 1: Depressive symptoms prevalence and association to successful aging (SA).

	Depressive Symptom	Prevalence %=	No-SA (%)	SA (%)	OR (CI 95%)	p=
A	Life satisfaction	No= 8.0 Yes= 92.0	7.8 92.2	9.1 90.9	.85 (.284 – 2.55) 1.00	.476
	Being in good spirits most of the time	No= 11.7 Yes= 88.3	12.6 87.4	4.5 95.5	3.02 (.79 – 12.94) 1.00	.085
	Feeling happy	No=12.5 Yes= 87.5	12.9 87.1	9.1 90.9	1.47 (.50 – 4.42) 1.00	.331
	Feeling helpless	Yes= 20.4 No= 79.6	21.8 78.2	9.1 90.9	2.79 (1.00 – 8.05) 1.00	.030
	Think it is wonderful to be alive	No= 5.0 Yes= 95.0	5.6 94.4	0.0 100.0	1.13 (1.09 – 1.17) 1.00	.092
	Feeling in a hopeless situation	Yes=15.2 No= 84.8	16.5 83.5	4.5 95.5	4.15 (1.03 – 17.6) 1.00	.022
	Thinking most people are better than you	Yes= 22.4 No= 77.6	23.5 76.5	13.6 86.4	1.94 (.79 – 4.76) 1.00	.094
B	Drooped many activities and interests	Yes= 38.4 No= 61.6	41.7 58.3	11.4 88.6	5.58 (2.15 – 14.51) 1.00	.000
	Feelings of emptiness in life	Yes= 18.5 No= 81.5	19.6 80.4	9.1 90.0	2.43 (.84 – 7.04) 1.00	.061
	Often getting bored	Yes= 24.2 No= 75.8	26.1 73.9	9.1 90.9	3.52 (1.22 – 10.11) 1.00	.007
	Preferring to stay home rather than going out and doing new things	Yes= 43.6 No= 56.4	46.8 53.2	18.2 81.8	3.95 (1.78 – 8.74) 1.00	.000
C	Feeling full of energy	No= 22.2 Yes= 77.8	23.8 76.2	9.1 90.9	3.12 (1.08 – 8.98) 1.00	.016
D	Feeling to have less memory than others	Yes= 24.7 No= 75.3	25.5 74.5	18.2 81.8	1.53 (.69 – 3.43) 1.00	.192
E	Feeling pretty worthless	Yes=15.2 No= 84.8	16.0 84.0	9.1 90.9	1.90 (.65 – 5.51) 1.00	.165
F	Afraid that something bad happens	Yes= 30.2 No= 69.8	31.7 68.3	18.2 81.8	2.08 (1.01 – 4.62) 1.00	.044

Notes: SA= Successful Aging, OR= Odds Ratio crude, CI= Confidence Interval, A=depressed mood, B= anhedonia, C= fatigue, D= cognitive symptoms, E= worthless or guilt, F= death thoughts

30.2% of the participants, and cognitive symptom was reported by 24.7% (Feeling to have less memory than others).

Fatigue was reported by 22.2%, and most common symptoms related with depressed mood were thinking most people are better than one (22.4%), feeling helpless (20.4%). Less frequent symptoms were worthless (15.2%), and feeling not happy (12.5%), unsatisfied in life (8%) among those related with depressed mood.

Regarding successful aging, 46.9% met the criteria of no important disease, 57.4% met the criteria of no disability, 39.2 had high physical functioning, 88.8% high cognitive functioning, and 51.1% were engaged with life. However, only 11% (n=44) met the five criteria for being considered as successful aging.

The analyzes of the effects of depressive symptomatology in the successful aging, results are shown also in Table 1.

Among depressed mood symptomatology, participants feeling helpless had higher probability of not having successful aging (OR=2.79, CI= 1.00 – 8.05) than those not feeling helpless, feeling in a hopeless situation was also a risk factor, participants had 4.14 (1.03 – 17.6) times the risk for not being successful agers compared to those not feeling in a hopeless situation. All symptoms of anhedonia were significantly related to successful aging, participants that drooped many activities and interests had 5.58 (CI= 2.15 – 14.51) times the risk for not being successful agers compared to those that continue in their activities and interest. Often getting bored and preferring to stay home rather than going out and doing new things were also significant symptoms, increasing the risk in 3.52 (CI 1.22 – 10.11) and 3.95 (1.78 – 8.74) times, respectively, for not having successful aging, compared to those older adults that not often get bored and prefer to go out and doing new things. Fatigue was also a significant risk factor for successful aging, those who referred not feeling full of energy had 3.12 (CI=1.08 – 8.98) times the risk for not achieving successful aging compared to those feeling full of energy. Older adults that were afraid that something bad happens had higher probability of not being successful agers 2.08 (1.01 – 4.62) than those not feeling in that way.

Finally, OR were adjusted including in the models the significant depressive symptomatology. When symptoms were entered in the model, the symptoms that remain significant were those referring anhedonia, specifically drooped many activities and interests β=4.45 (CI=1.69 – 11.71, p<.000), preferring to stay home rather than going out and doing new things β=3.05 (CI= 1.36 – 6.87, p<.000), and the interaction between them β=2.13 (CI=1.55 – 2.93, p<.000).

Discussion

In this study prevalence of depressive symptomatology (27.7%) was similar to those reported in previous community-dwelling studies [2]. Also, in line with prior findings where

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prevalence rate of subclinical depression is estimated ranging from 10 – 50% [21]. It is important to underline that, although the literature has consistently shown that the prevalence and incidence of major depression in older adults is significantly lower than in younger and middle-aged adults, impact on the daily life are enormous.

Prevalence of successful aging observed in this study (11%) is also in line with previous studies in the same context, Arias Merino, et al. [11], reported a prevalence of 12.6%. Although the lack of consensus defining successful aging is still an issue, most commonly used criteria for defining successful aging were included in this study.

There are few empirical studies that have associated depressive symptoms and successful aging, giving greater weight to biological aspects, however, there is vast evidence that psychological factors contribute to well-being and health of older people [22]. Vahia, et al. [23], explored differences of measures of successful aging in older women we explored differences between women with depressed mood and/or anhedonia and those without either of these symptoms, classified as nondepressed, subthreshold depression and clinical depression. They reported that even mild-moderate levels of depressive symptoms were associated with worse functioning on the components of successful aging they examined, involving self-rated successful aging, physical, mental and social functioning, and personality traits. Other studies have reported in a general way that life satisfaction and wellbeing, defined as the absence of depression, is a predictor of successful aging [24,25].

In this study we went deeper to identify specific depressive symptomatology and found that most significant depressive symptoms associated with successful aging were those involving anhedonia. Anhedonia is a core component of depressive disorders since its introduction in the Diagnostic and Statistical Manual of Mental Disorders III Edtition and is defined as the loss of interest or pleasure, which means a loss of the ability to feel joy doing the things that once made a person content and happy [26]. Social anhedonia is viewed as a trait-like vulnerability that increases a self-focus and tend to lead difficulties in interpersonal relationships, reducing engagement with the social environment, blunting in-the-moment emotional responses, and diminishing social skills. These psychological characteristics could compromise cognitive capacities, reducing the cognitive resources available to engage in social situations actively [27]. Individuals expressing social anhedonia are likely to experience reduced social connectedness and feel lonely [28]. In addition, limited social interactions is associated to reduced physical activity and functionality [29]. All this could be linked to successful aging, since it involves cognitive capacities, functional abilities and social engagement.

Depressed mood symptoms (feeling helpless, in a hopeless situation) and afraid that something bad happens (interpretated as dead thoughts symptom) were also significant risk factors that compromise successful aging in this study. In this sense, this psychological expressions of one´s commitment to life and the desire to continue living have been studied around the concept will-to-live, which encompasses reactions directed to continuing existence when coping with external treats [30]. Will-to-live correlates to happiness, life satisfaction, commitment to life and self-esteem [31]. In this sense, significant associations have been reported between successful aging and will-to-live, higher will-to-live predicted higher objective and subjective successful aging, and fewer medical conditions, less disability and pain symptoms; moreover, successful aging may be promoted by instilling hope, purpose, futurity, widening one´s existential orientation, and perseverance [30].

Fatigue was also a depressive symptom observed as a risk factor to successful aging in this study. Previous studies have underlined that the sensation of exhaustion and reduction of physical or mental exertion can reduce motor performance, capacity to allocate cognitive resources to perform activities and increase self-reported fatigue [32]. Fatigue is also associated to frailty, a syndrome characterized by diminished strength, endurance, and physiological function that promotes dependency and ultimately death, which has been also related to markers of successful aging [33].

Fortunately, depression at the old age has been treatable with good results. Cognitive-behavioral therapy has largely demonstrated to be an effective treatment for depressed adults [34]. Besides, previous studies have corroborating the role of resilience as a protective factor for depression in older persons [23], greater resilience has been reported as associated to less depressive symptomatology in older adults [35], fostering the use of interventions to promote resilience in older adults as a means of preventing and managing depressive symptoms in this population, hence, promoting successful aging.

Depression in aging is both underdiagnosed and undertreated in primary care settings, symptoms are often overlooked and untreated because they co-occur with other problems encountered by older adults [1]. Moreover, depression is under reported not only by the healthcare professionals, but also by the older adults themselves. This is mainly because of the stigma surrounding the situation which makes them reluctant to seek necessary care for mental health conditions [36].

Hence, it is important to diagnose and treat the older persons with depression at the earliest, this strategy might help in preventing severe disability and other complications [3]. Depressive symptomatology in older adults represents an entity that merits a close vigilance, might help to promote better opportunities for health and participation, enhancing probabilities for the successful aging.

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