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Research report

Depression in later life: A more somatic presentation?

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ABSTRACT

Background: Depression later in life may have a more somatic presentation compared with depression earlier in life due to chronic somatic disease and increasing age. This study examines the influence of the presence of chronic somatic diseases and increasing age on symptom dimensions of late-life depression.
Methods: Baseline data of 429 depressed and non-depressed older persons (aged 60–93 years) in the Netherlands Study of Depression in Old Age were used, including symptom dimension scores as assessed with the mood, somatic and motivation subscales of the Inventory of Depressive Symptomatology-Self Report (IDS-SR). Linear regression was performed to investigate the effect of chronic somatic diseases and age on the IDS-SR subscale scores.
Results: In depressed older persons a higher somatic disease burden was associated with higher scores on the mood subscale ($B=2.02$, $p=0.001$), whereas higher age was associated with lower scores on the mood ($B=-2.30$, $p<0.001$) and motivation ($B=-1.01$, $p=0.006$) subscales. In depressed compared with non-depressed persons, a higher somatic disease burden showed no different association with higher scores on the somatic subscale ($F(1,12)=9.2$; $p=0.003$; partial $\eta^2=0.022$).
Limitations: Because the IDS-SR subscales are specific for old age, it was not feasible to include persons aged <60 years to investigate differences between earlier and later life.
Conclusions: It seems that neither higher somatic disease burden nor higher age contributes to more severe somatic symptoms in late-life depression. In older old persons aged ≥ 70 years, late-life depression may not be adequately recognized because they may show less mood and motivational symptoms compared with younger old persons.

1. Introduction

Depression later in life may have a more somatic presentation compared with depression earlier in life (Wilkowska-Chmielewska et al., 2013), thereby complicating the recognition of depression (Mitchell et al., 2010). For instance, a recent meta-analysis found that depressed older persons showed more hypochondriasis and somatic symptoms of depression, whereas feelings of guilt and loss of sexual interest were more related to early-life depression (Hegeman et al., 2012a).

There are several explanations for a possibly more somatic presentation of depression in late-life. For example, the symptoms of (more frequent) somatic diseases in older age may be mistaken for somatic symptoms of depression. Also, several studies found an association between late-life depression and somatic comorbidity, whereas others found a weakening association between depression and somatic diseases with increasing age, despite an increase in the prevalence of somatic diseases (Braam et al., 2005; Kessler et al., 2010; Lyness et al., 2006; Scott et al., 2008). Alternatively, with increasing age depression might be characterized by more somatic symptoms due to various underlying age-related biological pathways in late-life depression compared with depression earlier in life (Alexopoulos et al., 2002; Belvederi et al., 2014; Kapfhammer, 2006; Krishnan et al., 2002; McKinney and Sibille, 2013; Naismith et al., 2012).

Using the Inventory of Depressive Symptomatology-Self Report (IDS-SR) among older people, we earlier identified a mood, motivation and somatic subscale reflecting three homogeneous symptom dimensions (Hegeman et al., 2012b). These IDS-SR symptom dimensions appeared to be specific for old age, as only two symptom dimensions including 'mood/cognition' and 'anxiety/arousal' were found at a younger age (Wardenaar et al., 2010).

The present study aims to investigate the effects of both somatic comorbidity and increasing age on the presentation of late-life depression according to the mood, motivation and somatic subscales

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of the IDS-SR (Hegeman et al. 2012b; Rush et al., 1996). To unravel the possible misattribution of symptoms of chronic somatic diseases and aging to depression, we examined the effects of chronic diseases and aging on IDS-SR symptom severity in depressed and non-depressed older people. We hypothesized that, with a higher number of chronic somatic diseases and higher age, there would be a more prominent somatic presentation of late-life depression as reflected in higher scores on the IDS-SR somatic subscale. However, we expected that a higher number of chronic somatic diseases and higher age would not affect the presentation of late-life depression with respect to mood and motivation symptoms according to the corresponding IDS-SR symptom subscales.

2. Methods

2.1. Study sample

Data were used from the baseline assessment of the Netherlands Study of Depression in Old Persons (NESDO), conducted among people aged ≥ 60 years. NESDO is a multi-site naturalistic cohort study examining the determinants, long-time course and consequences of depressive disorders at old age. The design of the NESDO is described in detail elsewhere (Comijs et al., 2011). In short, between 2007 and 2010 participants were enrolled from mental healthcare and primary healthcare settings to create a sample reflecting all different stages of depression. Excluded were persons with a psychotic disorder, obsessive–compulsive disorder or severe addiction disorder, and insufficient command of the Dutch language. Also excluded were persons with a Mini-Mental State Examination score (MMSE) < 18 or a primary diagnosis of dementia.

The baseline NESDO sample consists of 378 depressed (diagnosis within the last 6 months according to DSM-IV criteria) and 132 non-depressed persons aged 60–93 years (total sample $n=510$). The present study included 303 persons diagnosed with a depressive disorder according to the DSM-IV criteria within the last month before baseline assessment, and 132 non-depressed persons, all with complete data on the IDS-SR. Persons with missing total scores on all three subscales were excluded. For this reason, 3 persons from the 303 depressed group and 3 persons from the 132 non-depressed group were excluded, leaving 300 depressed and 129 non-depressed persons (total=429) for the present analysis. The persons with missing scores on all three subscales did not differ from the included persons with respect to gender ($p=0.313$) and number of years of education ($p=0.057$). Both depressed and non-depressed persons were included to examine differences in the presentation of depressive symptoms due to somatic diseases and higher age in their own right, and in relation to depression.

The study protocol was approved by the ethical review boards of all the participating centers and informed consent was signed by all participants.

2.2. Measures

2.2.1. Socio-demographics

Demographic information was collected with standard questions concerning age, gender and years of education. Age was used as a categorical variable with a cut-off age of 70 years, being close to both the median and mean age of the whole sample. Thus, the 'younger old' are defined as people aged < 70 years and the 'older old' as people aged ≥ 70 years.

2.2.2. Depressive symptoms and neuropsychiatric characteristics

The presence of a depressive disorder (major depression, dysthymia and minor depression) according to the DSM-IV criteria within the last month before the baseline assessment was measured with the Composite International Diagnostic Interview (CIDI; WHO version 2.1; lifetime version) (Wittchen et al., 1991). The Dutch translation of the IDS-SR (Rush et al., 1996) was used to compute total scores of the three old-age specific IDS-SR subscales (Hegeman et al. 2012b). The IDS-SR items of the mood, somatic and motivation subscales were scored on a four-point scale (range 0–3 points) (Fig. 1). These age-specific subscales of the IDS-SR can be used in older persons with no or different stages of depression and have shown adequate properties across different age and gender groups in late-life (Hegeman et al. 2012b). Global cognitive functioning was assessed with the MMSE (Folstein et al., 1975).

2.2.3. Clinical characteristics

A self-report questionnaire was used to assess the presence of chronic somatic diseases as follows: participants were asked whether they had chronic non-specific lung disease, cardiovascular diseases, diabetes mellitus, stroke, intestinal disorders, arthritis or arthrosis, cancer, thyroid gland diseases, or any other disease. Obtaining information on the presence of chronic somatic diseases using a self-report questionnaire has shown to be adequate compared with obtaining information from the general practitioner (Kriegsman et al., 1996). The total number of chronic somatic diseases was obtained by counting the number of self-reported chronic somatic diseases (count 0–8), excluding hypertension, and dichotomized into 0 or 1, and 2 or more chronic somatic diseases. The cut-off of 2 chronic somatic diseases is close to the mean number of chronic somatic diseases (1.9) in the whole sample, and distinguishes between no/lower somatic disease burden and a higher somatic disease burden.

The current smoking status was derived from the Fagerstrom test for Nicotine Dependence. Alcohol use was defined as the amount of glasses consumed per day and assessed with the

Mood subscale	
Item 5	Feeling sad
Item 6	Feeling irritable
Item 7	Feeling anxious or tense
Item 8	Reactivity of mood
Item 10	Quality of mood
Item 17	Future pessimism
Item 18	Suicidal thoughts
Item 27	Panic/phobic symptoms
Item 29	Interpersonal sensitivity
Somatic subscale	
Item 1	Initial insomnia
Item 2	Middle insomnia
Item 3	Early morning awakening
Item 11/12	Appetite disturbance
Item 13/14	Weight disturbance
Item 22	Interest in sex
Item 25	Aches and pains
Item 26	Sympathetic arousal
Motivation subscale	
Item 4	Sleeping too much
Item 16	Self criticism and blame
Item 19	Interest in people/activities
Item 20	Energy/fatiguability
Item 23	Psychomotor retardation

Mood subscale: 9 items, maximum score=27; Somatic subscale: 8 items, maximum score=24; Motivation subscale: 5 items, maximum score=15.
Abbreviations: IDS-SR, Inventory of Depressive Symptomatology-Self Report

Fig. 1. Items of the IDS-SR subscales.