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Research report

A comparison of GP and GDS diagnosis of depression in late life among multimorbid patients – Results of the MultiCare study

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ABSTRACT

Background: The objective of the study was to compare General Practitioners' (GPs) diagnosis of depression and depression diagnosis according to Geriatric Depression Scale (GDS) and to identify potential factors associated with both depression diagnosis methods.
Methods: The data were derived from the baseline wave of the German MultiCare1 study, which is a multicentre, prospective, observational cohort study of 3177 multimorbid patients aged 65+ randomly selected from 158 GP practices. Data were collected in GP interviews and comprehensive patient interviews. Depressive symptoms were assessed with a short version of the Geriatric Depression Scale (15 items, cut-off 6). Cohen's kappa was used to assess agreement of GP and GDS diagnoses. To identify factors that might have influenced GP and GDS diagnoses of depression, binary logistic regression analyses were performed.
Results: Depressive symptoms according to GDS were diagnosed in 12.6% of the multimorbid subjects, while 17.8% of the patients received a depression diagnosis by their GP. The agreement between general practitioners and GDS diagnosis was poor. To summarize we find that GPs and the GDS have different perspectives on depression. To GPs somatic and psychological comorbid conditions carry weight when diagnosing depression, while cognitive impairment in form of low verbal fluency, pain and comorbid somatic conditions are relevant for a depression diagnosis by GDS.
Conclusions: Each depression diagnosing method is influenced by different variables and therefore, has advantages and limitations. Possibly, the application of both, GP and GDS diagnoses of depression, could provide valuable support in combining the different perspectives of depression and contribute to a comprehensive view on multimorbid elderly in primary care setting.

1. Introduction

The aging of the population especially in Western societies is the leading cause for multimorbidity (van den Bussche et al., (2013); van den Akker et al., 1996; van den Bussche et al., 2011;

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Fortin et al., 2005; Hoffman et al., 1996; Wolff et al., 2002). It has been suggested that depression is a health problem that deserves special attention within the context of multimorbidity (John et al., 2003; Aragonès et al., 2007). Depression has been shown to accelerate the pathway of disablement and multimorbidity among older people (van Gool et al., 2005) and to increase the burden of somatic complaints (Härter et al., 2007) and subjective suffering (Goldney et al., 2000). Although only a few studies have examined implications of depression in the context of physical comorbidity, available evidence indicates worse health outcomes, impaired functioning and increased health care utilisation (Aragonès et al., 2004; Alexopoulos et al., 2002; Katon and Ciechanowski, 2002; Wittchen et al., 1999; Schäfer et al., 2012; Lehnert et al., 2011). Therefore, early detection and successful treatment of depression is essential. A number of studies describe low recognition rates of depression in primary care setting (Cipoiu et al., 2007; Mitchell et al., 2009), but these studies do not consider the different perspectives on depression by GPs and depression screening tests. There are numerous depression rating scales available. We followed the recommendation by Watson and Pignone (2003), who postulate that the Geriatric Depression scale (GDS) is a screening instrument for late-life depression that demonstrates good accuracy and therefore is particularly useful in the primary care setting. The GDS is mainly based on behavioural and cognitive aspects of depression and is not heavily weighted toward somatic complaints. Therefore it is supposed to reliably differentiate depressed from non-depressed elderly suffering from physical illness (Sheikh and Yesavage, 1986). In contrast general practitioners (GPs) also consider the somatic dimension of depression and have access to the biographical background of the patients. In the context of multimorbidity GPs as well as the GDS may provide different important information for diagnosis of depression in these patients. Thus, the objective of the study is (1) to determine the prevalence of depressive symptoms in late life among a large cohort of multimorbid patients, (2) to compare GP and GDS diagnosis of depression, and (3) to identify factors associated with depression diagnosis by GPs and GDS from a multicentre, observational cohort study of 3177 multimorbid patients aged 65 and over in Germany.

2. Methods

2.1. Sample

The data were derived from the baseline wave of the German MultiCare1 study (Patterns of multimorbidity in primary health care – a prospective cohort study). The subjects were recruited in 158 GP practices in 8 study centres (Bonn, Düsseldorf, Frankfurt/Main, Hamburg, Jena, Leipzig, Mannheim and Munich). In each practice we created a list of patients based on the electronic database of the GP. This list encompassed all patients who were born between July 1923 and June 1943 and consulted a GP at least once within the last completed quarter. From this list we randomly selected 50 patients per GP with multimorbidity and contacted them for written informed consent. Multimorbidity was defined as the coexistence of at least three chronic conditions out of a list of 29 diseases (Schäfer et al., 2009). Patients were excluded from the study if they were not regular patients of the participating practice (i.e. in case of accidental consultation with the GP), if they were unable to participate in interviews (especially blindness and deafness) or if they were not able to speak and read German. Further exclusion criteria were residence in a nursing home, severe illness probably lethal within three months according to the GP, insufficient ability to consent (especially in case of dementia) and participation in other studies at the present time. Information on the sampling frame and the sample is provided in Fig. 1. 3177 patients were included in the study (Schäfer et al., 2012).

2.2. Data collection

Recruitment and baseline data collection took place from July 2008 to October 2009. The study subjects were interviewed in their home environment by trained interviewers conducting standardized structured clinical interviews. In addition, GPs were interviewed. A comprehensive description of collected data is shown in the study protocol (Schäfer et al., 2009).

Within the face-to-face interview with the participant, all relevant sociodemographic information (age, gender, marital status and education based on the revised version of the international CASMIN educational classification (Brauns and Steinmann, 1999)) was collected. Satisfaction with the GP treatment was measured by means of the question “Would you recommend your GP to friends with chronic conditions?” Furthermore, clinical factors were assessed. Verbal fluency based on the CERAD battery (Luck et al., 2009) was measured. The patients were given the order to name as many animals as possible in one minute. Severity of pain and disability was assessed with the Graded Chronic Pain Scale by von Korff et al. (1992), a seven-item questionnaire that measures both pain intensity and interference with daily activities. The Graded Chronic Pain Scale (GCPS) has a hierarchical structure allowing classification of respondents into one of four classes: grade 1 (low intensity, low interference), grade II (high intensity, low interference), grade III (moderate interference), or grade IV (severe interference). The Instrumental Activities of Daily Living Scale (IADL) by Lawton and Brody (1988) is an appropriate instrument to assess independent living skills. This instrument is useful for identifying how a person is functioning at the present time. Antidepressant medication was selected from the ATC-Index by the scientific institute of the AOK (WIdO).

In the GP interview the disease spectrum of the patients was assessed by means of a standardized instrument which documented the ICD10-codes of a list of 46 chronic conditions. Chronicity of diagnosis was assessed using the scientific expert report for the formation of a morbidity orientated risk adjustment scheme in German Statutory Health Insurance (Busse et al., 2007). The GP was asked to state for each condition, whether the patient was currently affected and if, for how many years. The interviewers also collected basic data of the GPs and their practices (e.g. age, gender, date of practice set up).

2.3. Definition of depression

Depressive symptoms were assessed with the short version of the Geriatric Depression Scale (GDS-15), a 15-item screening instrument that involves a dichotomous answer format developed by Sheikh and Yesavage (1986) to identify elderly patients with significant depressive symptoms, and which is sensitive to depression among elderly persons suffering from physical illness. For 10 of the questions the answer ‘yes’ gives a positive score (indicating depression), in the remaining five the answer ‘no’ scores positively. The scores are then summed to give a total of 0–15. Comparing the German version of the GDS-15 with a psychodiagnostic interview (Mini-DIPS, Margraf, 1994), a cut-off score of 6 yielded the best sensitivity (84%) and specificity (88.9%) (Gauggel and Birkner, 1999). Therefore, we defined significant depressive symptoms as a score of 6 or higher.

In addition, depression of study participants recognised by GPs was assessed using GP interviews in the form of a standardized documentation instrument with yes/no answers. GPs' assessment was based on a direct contact with the patient. According to GP