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## Medically unexplained symptoms in later life

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*Document Version*

Publisher's PDF, also known as Version of record

*Publication date:*

2014

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Hilderink, P. H. (2014). *Medically unexplained symptoms in later life*. Groningen: s.n.

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## CHAPTER 1

### General introduction

Based on:

Medically unexplained symptoms in older adults: a combination of physical, psychiatric and psychological factors.

P.H Hilderink, C.E.M. Benraad, T. J. W. van Driel, M.G.M Olde Rikkert.  
Nederlands Tijdschrift voor Geneeskunde 2008; 152 (23) 1305-1309.



## Background

The experience of somatic symptoms is a normal phenomenon in the general population. Two out of three men and three out of four women report at least one medical complaint in the last two weeks <sup>1</sup>. This concerns symptoms such as headache, low back pain, fatigue and dizziness <sup>2</sup>. Most people, however, do not seek medical care for these complaints <sup>3</sup>. A substantial part (30-50%) of somatic symptoms presented in primary care remain medically unexplained <sup>4-6</sup>. In secondary medical care these percentages are even higher <sup>7, 8</sup>. Physical complaints become especially burdensome when they persist over time and when people persevere in seeking medical help. The burden of somatic complaints for which no medical explanation can be found is large. Patients often report a low quality of life and co-morbidity rates with anxiety and depressive disorders are high <sup>9, 10</sup>. Furthermore, the absence of a medical explanation gives rise to high levels of health care consumption in search for an organic origin of complaints, which subsequently places patients at risk for extensive investigations and iatrogenic damage <sup>11</sup>.

## Terminology

The best term to describe physical complaints of patients with unclear aetiology is subject to controversy. Many different terms are used, including functional somatic symptoms, psychosomatic symptoms, vague symptoms, subjective health complaints, and medically unexplained symptoms.

We have chosen to use the term Medically Unexplained Symptoms (MUS) in this thesis because this term is purely descriptive, neutral, and widely used in both clinical practice and the scientific literature <sup>12, 13</sup>. Nonetheless, we acknowledge that this term is still controversial, because it reflects dualistic thinking between body and mind and it may have a negative connotation as it may imply that medicine has nothing to offer for the patient <sup>14</sup>. From a patient perspective, however, “medically unexplained” and “functional” symptoms seem to be the most acceptable terms <sup>15-17</sup>. We define MUS as physical symptoms of which presence, severity or consequences cannot be explained by objectively detectable pathological abnormalities.

In the absence of physical abnormalities, symptoms are often assumed to arise as a consequence of psychological stress. This process is called somatisation in the psychological literature <sup>18</sup>. In the medical literature and the Dutch multidisciplinary guideline on MUS and somatoform disorders, somatisation is defined as the tendency to experience and communicate somatic distress and somatic symptoms unaccounted for by relevant pathological findings, to attribute them to physical illness, and to seek medical help for them <sup>19</sup>.

In the Diagnostic and Statistical Manual of Mental Disorders IV-TR (DSM IV-TR), MUS are considered as the core criterion for a somatoform disorder. Depending on type and combinations

of symptoms, duration, intensity, and level of distress, patients suffering from MUS may or may not be classified as having a specific somatoform disorder like somatisation disorder, pain disorder, conversion disorder, hypochondriasis, undifferentiated somatoform disorder or somatoform disorder not otherwise specified. Thus, the key step in classifying MUS as a somatoform disorder according to the DSM-IV-TR remains the exclusion of a medical cause. This classification system of somatoform disorders has been criticized as the assessment of whether symptoms are medically unexplained is unreliable, and because the concept is based on a dualistic view between body and mind <sup>20, 21</sup>. To exclude a somatic symptom on the basis of underlying physical illness or injury, a doctor must be consulted and a definite diagnosis must be made based on objectively detectable pathological abnormalities on examination or investigation. This central requirement is associated with significant conceptual and practical difficulties. As a result of these difficulties, many population-based surveys have omitted somatoform disorders, and health care planners have tended to ignore these disorders <sup>14</sup>. In DSM 5, somatoform disorders have been replaced by somatic symptom disorders. In the criteria for somatic symptom disorder, the exclusion criterion of the absence of a somatic cause has been omitted and criteria on the presence of psychological symptoms in relationship to the somatic symptoms are required now <sup>22</sup>.

## MUS and somatoform disorders in later life

Although the clinical impression is that MUS are common in all age groups, MUS in later life have received very little attention. There are several pitfalls that may contribute to this neglect of somatoform disorders and MUS in later life. These pitfalls are illustrated in the following description of three patients who visited an outpatient clinic for older persons with MUS. This outpatient clinic is based on a biopsychosocial approach, which is operationalized by consecutive diagnostic assessments by a geriatrician, a psychiatrist, and a psychologist within two weeks.

### *Case A*

Patient A was a 75 year old widow with complaints of pain in her lower back and both legs since more than six months. As a result of this pain and reduced energy, she spent most of her time in bed. Analgesics (acetaminophen and morphine) given by her general practitioner did not sort any effect. Subsequently, the general practitioner suspected the presence of a depression and started treatment with clomipramine. This treatment initially resulted in some improvement, but six months later she was referred to our outpatient MUS clinic, because the pain had become chronic. At that time, the pain was most burdensome when standing or walking, while lying down relieved the pain slightly. She was not able to walk a hundred metres and felt extremely tired. Her daughter stressed that her mother's complaints might be related to the death of her mother's husband, who died three years ago, as the pain in her mother's legs started at that time. Physical examination by the geriatrician showed normal muscle strength, normal sensibility, and normal reflexes in her legs. Nonetheless, she was not able to walk across a line and the Romberg test was positive. She had an ataxic gait with a

forward bend posture. During the examination, the pain in her legs was located on the backside of her legs going down to her feet. Psychiatric examination confirmed an earlier depressive episode in complete remission after treatment with clomipramine. An X-ray examination of the lumbar spine showed multiple degenerative abnormalities and multiple mild and moderate dispositions between L2-L5. Although these findings were also present on an earlier examination one year ago, this had not led to further referral to exclude a lumbar stenosis. This latter diagnosis was now confirmed with a subsequent MRI examination in the orthopaedic outpatient clinic. Surgical decompression resolved her complaints almost completely.

#### *Case B*

Patient B was a 75 year old woman, who was referred to our outpatient clinic because of chronic bowel distress and an obsessive fixation on her defecation. Her complaints started about two years ago, initially with constipation and a depressed mood. She lost approximately 10 kg weight (actual weight in the past few months was 58 kg) and had trouble falling asleep. Several antidepressants (venlafaxine, nortriptyline, trazodone, sertraline) had been prescribed in therapeutic doses for sufficiently long periods, as well as augmentation strategies with risperidone and lithium. All treatment steps however failed, including inpatient treatment at a psychiatric ward of a general hospital for one month and a day care programme for three days a week. The consulted gynaecologist and internist could not find any explanation for her somatic complaints. A trial with laxatives did not yield any positive effects. On-going fixation on her bowel problems hindered compliance to the psychiatric treatment and made her husband desperate. This finally led to referral to our MUS outpatient clinic.

During the intake assessment, we saw a woman that complained merely about her defecation, while she also reported gastric problems such as belching. Psychiatric examination suggested a depressed mood with minimal facial expression and slowed movements. The Montgomery Asberg Depression Rating Scale (MADRS) score was 32, indicating a severe depression. The physical examination by the geriatrician did not provide any new information. We concluded that she suffered from a severe depression with secondary obstipation, possibly partly explained by antidepressant drug use. She was again clinically treated at a ward for geriatric psychiatry. Trazodone was switched to nortriptyline and the lithium dose was lowered in order to improve her slowed movement. MADRS scores declined rapidly to 8 in four weeks, after which she could be discharged from the hospital.

#### *Case C*

Patient C was a 65 years old woman with complaints of headache since more than six months. The pain was located at the left side of her head, and she feared a brain tumour. The pain had started a few years ago, after an acute attack of dizziness and nausea during which she vomited in public. Since then, she continuously suffered from headaches. Since she experienced syncope a few months ago, she was convinced that she had a brain tumour. As she ruminated the entire day about having a brain tumour, she was referred to our clinic. She had never

consulted a psychiatrist before. Her physical examination revealed no abnormalities; also the CT scan of her brain was completely normal. Although she was somewhat reassured by these findings, the headache remained. The assessment by the psychologist revealed that the pain had a negative impact on her sleep as well as her housekeeping and daily activities. She could be motivated to participate in cognitive behavioural group therapy. Six months later, she was completely free of headaches.

### What can we learn from these cases?

Case A illustrates the main concern of most doctors: the fear of missing a somatic cause of a symptom. In their initial assessments, doctors tend to overestimate the presence of somatic explanations for a complaint. This may lead to “false-positive somatic explanations”, a problem that increases in older age groups<sup>23</sup>. Increasing diagnostic difficulties of MUS in later life can be explained by a higher prevalence rate of co-morbid somatic disorders. The presence of one or more somatic diseases as well as the use of multiple medications with a range of potential side-effects make it difficult to determine whether complaints can be attributed to these diseases and their pharmacological treatment or not<sup>24</sup>. Furthermore, reference values of routine blood examinations are generally based on values found in non-elderly populations, which may also increase the risk to consider a symptom as medically explained if one or more parameters are below these reference values<sup>25</sup>. Finally, ageism, by the clinician as well as the patient and his or her family may incorrectly attribute somatic symptoms to the process of ageing. This latter explanation has probably played a role in case A. The degenerative abnormalities were considered normal for her age and led to the decision to withhold the patient from further examinations.

Case B illustrates the narrow relationship of somatic complaints with other psychiatric disorders, especially depressive disorders. Psychiatric co-morbidity with anxiety and depression is high in MUS patients<sup>9, 26</sup>. Moreover, in patients with established somatic disease, the presence of depressive symptoms is highly correlated with the number and severity of subjective somatic complaints<sup>27</sup>. Nonetheless, the recognition of depression and anxiety in patients with somatic symptoms remains problematic in clinical practice<sup>28</sup>. The high co-morbidity rates have raised doubts on clinical validity of somatoform disorders as a separate psychiatric disorder. This belief is further enforced by the fact that antidepressants are the sole pharmacological group for which the effectiveness has been proven in patients with somatoform disorders<sup>29</sup>. Finally, the fact that patients with a late-life depressive disorder more often present with somatic symptoms compared to younger depressed patients may also contribute to the neglect of somatoform disorders in later life<sup>30-32</sup>. Many old age psychiatrists regard MUS as a symptom or secondary phenomenon of depression.

The case of patient C illustrates the benefit of a multidisciplinary approach and the fact that patients with MUS may benefit from cognitive behavioural therapy. Although the effectiveness of cognitive behavioural therapy has only been proven for adult patients<sup>8</sup>, the clinical

experiences in older patients are promising<sup>33</sup>. The majority of patients, however, do not receive adequate therapy. This may partly be explained by the difficulties medical doctors experience in their contacts with MUS patients<sup>34</sup>. Referral to cognitive-behavioural therapy may be particularly low for older patients, because older people are less often offered psychological therapy in general<sup>35</sup>. Referrals to other medical specialities increase with a higher age of the patient, while referrals to mental health services strongly decline beyond the age of 65 years<sup>36</sup>. To date, 17% of the Dutch population is above the age of 65 years, whereas in Dutch psychologist practices only 7% of the patients is 60 years or above, and only 2% of the patients is above the age of 70 years<sup>37</sup>.

## Aims and outline of this thesis

MUS in later life are neglected, both in research as well as in clinical settings, including general practice and old age psychiatry. This has resulted in limited empirical data<sup>38</sup> and ignorance of this subject in health care planning for older persons<sup>14</sup>. To organise better health care for this vulnerable group of patients, we first have to increase our knowledge on MUS in older persons. The aim of this thesis is to expand our knowledge about the presence, clinical presentation, and consequences of MUS in later life. First, information is needed on the prevalence of this problem in later life. So far no systematic review has been performed on the prevalence rates of MUS and somatoform disorders in later life. Second, the interaction of MUS and depression needs a more thorough investigation: are MUS in later life merely reflections of depression? Third, the distinction between medically unexplained and explained symptoms is problematic, especially in later life. Can a multidisciplinary approach be part of a solution for this complex problem? Finally, what are the consequences of MUS on the level of functioning and quality of life?

## Prevalence

*What is the prevalence of MUS and somatoform disorders in later life?*

In chapter 2, we aim to estimate the prevalence of MUS and somatoform disorders in the older population based on the available literature. More specifically, we will first estimate prevalence rates for MUS and somatoform disorders according to diagnostic criteria. Secondly, we will compare prevalence rates of MUS and somatoform disorders in older age groups ( $\geq 65$  years) with those found in middle aged (50-65 years) and younger populations ( $< 50$  years).

## MUS and depression

*What is the role of co-morbidity of psychiatric disorders in elderly patients with MUS?*

In chapter 3, results of the pilot study in older patients with MUS referred to our outpatient clinic are presented. Characteristics of this convenience sample are outlined, with special emphasis on the relationship of MUS with co-morbid psychiatric disorders.



*What is the longitudinal relationship between pain and depression in the elderly?*

In chapter 4, we further investigate the longitudinal relationship between pain and depression. Does depression predict the onset of pain, or does pain increase the risk for depression? We analysed the longitudinal relationship between depression and pain based on a 12-year longitudinal study with repeated measurements (Longitudinal Aging Study Amsterdam).

### **MUS and Medically Explained Symptoms (MES)**

*What is the somatic disease burden in older patients with MUS?*

In chapter 5, the geriatric assessment of the pilot study is outlined and differences between explained, partly unexplained, and completely unexplained medically symptoms are described.

*How do MUS and MES impact on quality of life across the lifespan?*

In chapter 6, differences between medically explained (MES) and medically unexplained symptoms (MUS) were further analysed in order to establish whether the impact of symptoms on health-related quality of life differs between MUS and MES and to investigate if age affects this impact. Data were derived from the Prevention of Renal and Vascular End Stage Disease study (PREVEND).

### **Summary and final discussion**

In *chapter 7*, the results of this thesis are critically reviewed and recommendations for further research and clinical practice are given.

## Appendix

In this thesis, three different data sets were used derived from three studies: two population based studies and one pilot study located at a secondary care outpatient clinic.

### Clinical sample

This sample consisted of a consecutive case series of patients aged 60 years or over who were referred for MUS to a multidisciplinary outpatient clinic between September 2006 and October 2007. This outpatient clinic was part of a secondary care, old-age psychiatric service of the Nijmegen Mental Health Center (currently part of ProPersona). Of the 48 patients who were consecutively referred for MUS, 37 patients gave informed consent to participate in the study. Reasons for refusal were: lack of motivation (n=4), aversion against mental health organization (n=2), hospitalization for an acute disease (n=2), moved (n=1), or unknown (n=1). One subject was excluded because of an age below 60 years. All patients underwent a standardized examination of a geriatrician, an old-age psychiatrist, and a clinical psychologist within two weeks. The geriatrician performed a full physical examination, ECG, routine blood chemistry, and a cognitive screening with the Mini Mental State Examination (MMSE). Psychiatric disorders were assessed according to the criteria of the DSM-IV-TR using the Mini International Neuropsychiatric Interview version 5.0.0 by an old-age psychiatrist.

### The Longitudinal Aging Study Amsterdam (LASA)

This study is a prospective cohort study of Dutch people aged 55 to 85 years (n=3107). LASA started in 1992 and has been described and reported extensively elsewhere<sup>39,40</sup>. The general aim of LASA was to study the autonomy and well-being of an aging population. A randomly selected age- and sex-stratified sample (according to expected mortality figures) was drawn from the population registers of 11 municipalities in the Netherlands. The reason for this relative oversampling of men and older-old people (both men and women) was to compensate for an anticipated higher unavailability for follow-up among the older-old and men. The sample first took part in the cross-sectional NESTOR-living arrangements and social networks study<sup>41</sup> and was later interviewed and followed up every 3 years in LASA. Of the NESTOR-living arrangements and social networks study sample, 81.7% of the persons also participated in LASA (non-response was related to age but not to sex). All interviews were tape-recorded for quality control purposes.

For the study presented in this thesis, we used data up to 12 years of follow-up and excluded only those LASA participants in whom depressive symptoms (n=14), pain symptoms (n=1028), or both depressive and pain symptoms (n=37) were not evaluated at baseline, leaving a total study sample of 2028 participants (65.3%).

## The Prevention of Renal and Vascular End Stage Disease study (PREVEND)

PREVEND is a population-based cohort study investigating micro-albuminuria as a risk factor for renal and cardiovascular disease. The recruitment of participants is described elsewhere <sup>42</sup>. All inhabitants of the city of Groningen between the ages of 28 and 75 years (85 421 subjects) were asked to send in a morning urine sample and to fill out a short questionnaire on demographics and cardiovascular history. A total of 40 856 subjects (47.8%) responded. After exclusion of subjects with insulin-dependent diabetes mellitus and pregnant women, all subjects with an elevated urinary albumin concentration of  $\geq 10$  mg/l ( $n=7768$ ), together with a randomly selected control group with a urinary albumin concentration of  $< 10$  mg/l ( $n=3395$ ), were invited for further investigations (total  $n=11\ 163$ ). Finally, 8592 subjects completed the total screening program, making up the PREVEND study cohort. Because the PREVEND study population was enriched for albuminuria, this oversampling for albuminuria was counterbalanced in the current sub study. Albuminuria-negative participants and a random sample of albuminuria-positive participants were combined so that a population representative ratio of albuminuria-positive participants was achieved. Research assistants handed over invitations in the 2001–2002 wave to 2554 subjects to participate in this sub study, for which additional psychiatric and psychosocial data were collected. Of these 2554 subjects, 1094 (43%) completed the additional measurements. Follow-up measurements in the 2003–2004 wave were completed by a total of 976 participants (89% of the cohort with additional psychiatric and psychosocial data). This latter group was analysed with respect to MES and MUS in this thesis.

**References**

1. Ihlebaek C, Eriksen HR, Ursin H. Prevalence of subjective health complaints (SHC) in Norway *Scand J Public Health* 2002; 30: 20-9.
2. Kroenke K, Spitzer RL. Gender differences in the reporting of physical and somatoform symptoms *Psychosom Med* 1998; 60: 150-5.
3. Green LA, Fryer GE, Yawn BP, Lanier D, Dovey SM. The ecology of medical care revisited. *N Engl J Med* 2001; 344: 2021-5.
4. Khan AA, Khan A, Harezlak J, Tu W, Kroenke K. Somatic symptoms in primary care: etiology and outcome. *Psychosomatics* 2003; 44: 471-8.
5. Peveler R, Kilkenny L, Kinmonth AL. Medically unexplained physical symptoms in primary care: a comparison of self-report screening questionnaires and clinical opinion. *J Psychosom Res* 1997; 42: 245-52.
6. Burton C. Beyond somatisation: a review of the understanding and treatment of medically unexplained physical symptoms (MUPS). *Br J Gen Pract* 2003; 53: 231-9.
7. Nimnuan C, Hotopf M, Wessely S. Medically unexplained symptoms: an epidemiological study in seven specialities. *J Psychosom Res* 2001; 51: 361-7.
8. Speckens AE, van Hemert AM, Spinhoven P, Hawton KE, Bolk JH, Rooijmans HG. Cognitive behavioural therapy for medically unexplained physical symptoms: a randomised controlled trial. *BMJ* 1995; 311: 1328-32.
9. de Waal MW, Arnold IA, Eekhof JA, van Hemert AM. Somatoform disorders in general practice: prevalence, functional impairment and comorbidity with anxiety and depressive disorders. *Br J Psychiatry* 2004; 184: 470-6.
10. Koch H, van Bokhoven MA, ter Riet G, van der Weijden T, Dinant GJ, Bindels PJ. Demographic characteristics and quality of life of patients with unexplained complaints: a descriptive study in general practice. *Qual Life Res* 2007; 16: 1483-9.
11. Barsky AJ, Orav EJ, Bates DW. Somatization increases medical utilization and costs independent of psychiatric and medical comorbidity. *Arch Gen Psychiatry* 2005; 62: 903-10.
12. Olde Hartman TC, Lucassen PL, van de Lisdonk EH, Bor HH, van Weel C. Chronic functional somatic symptoms: a single syndrome? *Br J Gen Pract* 2004; 54: 922-7.
13. van Dieren Q, Vingerhoets AJ. [Medically unexplained somatic symptoms are not unexplainable, misunderstood or vague physical complaints]. *Tijdschr Psychiatr* 2007; 49: 823-34.
14. Creed F. Should general psychiatry ignore somatization and hypochondriasis? *World Psychiatry* 2006; 5: 146-50.
15. Stone J, Wojcik W, Durrance D et al. What should we say to patients with symptoms unexplained by disease? The "number needed to offend". *BMJ* 2002; 325: 1449-50.
16. Kingma EM, Moddejonge R, Rosmalen J. [How do patients interpret terms for medically unexplained symptoms?]. *Ned Tijdschr Geneesk* 2012; 156: A4541.
17. Creed F, Guthrie E, Fink P et al. Is there a better term than "medically unexplained symptoms"? *J Psychosom Res* 2010; 68: 5-8.
18. Lipowski ZJ. Somatization: the concept and its clinical application. *Am J Psychiatry* 1988; 145: 1358-68.

19. Blankenstein A, Bouman T, Feltz-Cornelis vd C, Fischer E, Horst vd H, Swinkels J. Multidisciplinaire richtlijn: Somatisch onvoldoende verklaarde lichamelijke klachten en somatoforme stoornissen. Trimbos instituut, Utrecht, 2010.
20. Lipowski ZJ. Psychosomatic medicine: past and present. Part I. Historical background. *Can J Psychiatry* 1986; 31: 2-7.
21. Dimsdale J, Creed F, Disorders D-VWoSS. The proposed diagnosis of somatic symptom disorders in DSM-V to replace somatoform disorders in DSM-IV--a preliminary report. *J Psychosom Res* 2009; 66: 473-6.
22. Rief W, Isaac M. Are somatoform disorders 'mental disorders'? A contribution to the current debate. *Curr Opin Psychiatry* 2007; 20: 143-6.
23. Nimnuan C, Hotopf M, Wessely S. Medically unexplained symptoms: how often and why are they missed? *QJM* 2000; 93: 21-8.
24. Henderson A. Somatization in the elderly. In: Ono Y, Janca A, Asai M, N S (eds.), *Somatoform Disorders*. Springer/Verlag, Tokyo, 1999; 57-64.
25. Fairweather DS, Campbell AJ. Diagnostic accuracy. The effects of multiple aetiology and the degradation of information in old age. *J R Coll Physicians Lond* 1991; 25: 105-10.
26. Kroenke K. Patients presenting with somatic complaints: epidemiology, psychiatric comorbidity and management. *Int J Methods Psychiatr Res* 2003; 12: 34-43.
27. Drayer RA, Mulsant BH, Lenze EJ et al. Somatic symptoms of depression in elderly patients with medical comorbidities. *Int J Geriatr Psychiatry* 2005; 20: 973-82.
28. Kirmayer LJ, Robbins JM, Dworkind M, Yaffe MJ. Somatization and the recognition of depression and anxiety in primary care. *Am J Psychiatry* 1993; 150: 734-41.
29. O'Malley PG, Jackson JL, Santoro J, Tomkins G, Balden E, Kroenke K. Antidepressant therapy for unexplained symptoms and symptom syndromes. *J Fam Pract* 1999; 48: 980-90.
30. Soh KC, Kua EH, Ng TP. Somatic and non-affective symptoms of old age depression: ethnic differences among Chinese, Indians and Malays. *Int J Geriatr Psychiatry* 2009; 24: 723-30.
31. Brown RP, Sweeney J, Loutsch E, Kocsis J, Frances A. Involutional melancholia revisited. *Am J Psychiatry* 1984; 141: 24-8.
32. Kramer-Ginsberg E, Greenwald BS, Aisen PS, Brod-Miller C. Hypochondriasis in the elderly depressed. *J Am Geriatr Soc* 1989; 37: 507-10.
33. van Driel D, Hilderink P, de Bakker S, Benraad C, Speckens A. Cognitieve gedragstherapie bij ouderen met onverklaarde lichamelijke klachten. *Directieve therapie* 2007; 27: 177-196.
34. Hahn SR. Physical symptoms and physician-experienced difficulty in the physician-patient relationship. *Ann Intern Med* 2001; 134: 897-904.
35. Cooper C, Bebbington P, McManus S et al. The treatment of Common Mental Disorders across age groups: results from the 2007 Adult Psychiatric Morbidity Survey. *J Affect Disord* 2010; 127: 96-101.
36. Stirbu-Wagner I, Ursum J, Davids R et al. Landelijk Informatienetwerk Huisartsenzorg. Feiten en cijfers over huisartsenzorg in Nederland. NIVEL/IQ, Utrecht/Nijmegen, 2011.
37. Nederlands instituut voor onderzoek van de gezondheidszorg, NIVEL. Website van het Landelijk Informatie Netwerk Eerstelijns Psychologen (LINEP). <http://www.nivel.nl/linep>, visited 23-6-2013, Utrecht.

38. Wijeratne C, Brodaty H, Hickie I. The neglect of somatoform disorders by old age psychiatry: some explanations and suggestions for future research. *Int J Geriatr Psychiatry* 2003; 18: 812-9.
39. Beekman AT, Deeg DJ, van Tilburg T, Smit JH, Hooijer C, van Tilburg W. Major and minor depression in later life: a study of prevalence and risk factors. *J Affect Disord* 1995; 36: 65-75.
40. Huisman M, Poppelaars J, van der Horst M et al. Cohort Profile: The Longitudinal Aging Study Amsterdam. *Int J Epidemiol* 2011.
41. Knipscheer CP, Dykstra PA, van Tilburg TG, de Jong-Gierveld J. [Living arrangements and social networks of elders. A selection of findings from a NESTOR-Study]. *Tijdschr Gerontol Geriatr* 1998; 29: 110-9.
42. Pinto-Sietsma SJ, Janssen WM, Hillege HL, Navis G, De Zeeuw D, De Jong PE. Urinary albumin excretion is associated with renal functional abnormalities in a nondiabetic population. *J Am Soc Nephrol* 2000; 11: 1882-8.

