



Journal Homepage: - www.journalijar.com
**INTERNATIONAL JOURNAL OF
 ADVANCED RESEARCH (IJAR)**

Article DOI:10.21474/IJAR01/2547
 DOI URL: <http://dx.doi.org/10.21474/IJAR01/2547>



RESEARCH ARTICLE

PSYCHIATRIC PROBLEMS AMONG GERIATRIC POPULATION OF ARAR CITY, KINGDOM OF SAUDI ARABIA: PREVALENCE AND DETERMINANTS.

Nagah Mohamed Abo El-Fetoh¹, Mohammed Faried Mourad², Malak Abdulaziz Almuneef³, Waad Abdullah Alotaibi³, Othman Mashfi Alshammari⁴, Abdrahman Sulaiman Alanazi⁴ and Modhi A. Alanizi⁵.

1. Associate Prof. of Public Health and Community Medicine, Faculty of Medicine, Northern Border University, KSA.
2. Intern, Faculty of Medicine, Alfaisal University, Riyadh, KSA.
3. Intern, Faculty of Medicine, Qassim University, KSA.
4. Student, Faculty of Medicine, Northern Border University, KSA.
5. Intern, Faculty of Medicine, Northern Border University, KSA.

Manuscript Info

Manuscript History

Received: 25 October 2016
 Final Accepted: 23 November 2016
 Published: December 2016

Key words:-

psychological diseases; determinants; prevalence; elderly population; depression; Alzheimer's disease; obsessive compulsive disorder (OCD).

Abstract

The population of the world is aging rapidly, because of increasing life expectancy and falling birth rates. This age is also more prone to have chronic diseases and there is a need to ensure health and social support to that vulnerable group. Psychological diseases represent an important public health problem. Local level data concerning psychological diseases is essential for providing control programs. Study objective: To study the demographic profile of elderly and to estimate the prevalence of previously diagnosed psychological diseases, its types and its determinants among the elderly population of Arar city, Kingdom of Saudi Arabia. Methodology: The present cross sectional community based study was conducted in Arar city, the capital of Northern Borders Governorate of KSA, on 138 elderly people of age 60 years and more. Systematic random sampling technique was followed. Data was collected through personal interviews with the sampled elderly and filling the questionnaire, which guided us to the data of socio-demographic characteristics and psychological diseases, its types and its determinants. Results: The total prevalence of psychological diseases among studied elderly population was 14.4%. Depression was 8.7%, Alzheimer's disease was 2.9% and obsessive compulsive disorder (OCD) was 2.9% too. There is significant effect of age group ($P < 0.05$), but no significant effect of sex, educational level, marital status, smoking, diabetes mellitus or obesity on the occurrence of psychiatric problems among the studied elderly population ($P > 0.05$). Conclusion and recommendations: In light of the results of the present study; more research work is needed to assess objectively the psychiatric diseases among elderly population in Arar city, Northern Saudi Arabia and it seems reasonable to remain cautiously optimistic while continuing to work toward a full understanding of all factors determining the occurrence of all psychiatric problems among that vulnerable group.

Corresponding Author:- Nagah Mohamed Abo El-Fetoh.

Address:- Associate Prof. of Public Health and Community Medicine, Faculty of Medicine, Northern Border University, KSA.

Introduction:-

Population aging is on the rise around the globe due to consistent improvements in socio-economic and healthcare systems [1]. Population aging has been acknowledged as a priority issue since the first World Assembly on Aging convened by the United Nations in 1982. Older people are increasing both in number and proportion worldwide, but at a higher pace in developing regions, including the Arab countries [2].

The most accepted definition of the age group characterized as elderly is a person aged 65 years and older [3] but in Egypt, the age of 60 is still considered the beginning of aging according to the retirement age for most of people [4]. It is the fastest growing age group worldwide as a result of both increased life expectancy and a dramatic decline in fertility rates [5].

By 2050, the number of elderly persons is projected to increase from the current 6.9% to 16.4% [6]. For example, in Kingdom of Saudi Arabia (KSA), the elderly population increased from 3.48% in 1993 to 6.7% in 2004. This increase is a result of improved healthcare and socioeconomic standards [2].

Many studies have been done previously to estimate the prevalence of mental disorders with rates varying in different populations, age groups, times, and geographic locations. Psychiatric morbidity in primary care was estimated in 1995 around 30-46% of the visiting patients [7]. In 2002, depression and anxiety disorders were noted about 18% among adults in central Saudi Arabia [8]. Al Ibrahim et al., in 2010 showed an overall prevalence of 41% in a systematic review on depression [9], El Rufaie et al. in 2009 noted a 17% prevalence of depression among residents of Dammam [10]. Al Qahtani et al., in 2008 reported a 27% prevalence of depression in Asir [11]. Abdul Wahid et al. in 2011, reported an overall prevalence of depression nearing 12%, with 6% as severe cases, in the south-eastern region [12]. In Riyadh, Becker et al in 2002 and 2004, found depression prevalence to be 20% in primary care settings [13].

Depression is the most common mood disorder in later life. It may be associated with serious consequences, including; disability, functional decline, diminished quality of life, increased mortality and increased service utilization. Moreover it is undiagnosed in about 50% of cases (Charney et al ,2003) [14].

Literature regarding the prevalence of depression in the elderly is inconsistent. The reported prevalence worldwide ranged from 10% to 15%, with the highest level reported to be 45% (9,11). In developed countries, the prevalence of depression in the elderly ranged from 0.9% to 9.4% in private households and from 14% to 42% in institutional settings [15]. As for developing countries, such as Arab countries, elderly community-based studies reported a depression rate of 24.3% in Jordan [16], 25% in Kuwait [17], and 38.9% in Iraq [18].

Dementia and Alzheimer's disease (AD) represent a significant public health challenge for US society and one that is only likely to increase as the population ages. The number of people affected by Alzheimer's disease (AD) was 26.6 million worldwide in 2006, and it was estimated that \$156 billion is spent annually to care for dementia patients worldwide [20]. By 2050, the prevalence is expected to quadruple, so that 1 in 85 persons will be living with the disease [21], and 43.0% of them are expected to need a high level of care (e.g., a nursing home).

In a study conducted to show the prevalence of psychiatric disorders in a sample of elderly residents in rural and urban population of Zulfi region, Saudi Arabia, it was found that, OCD was 4.35% in urban population and 1.52% in rural population [22].

In a study to show the 1-month prevalence of obsessive-compulsive disorder (OCD) in elderly in Gothenburg, Sweden. It was found that, the one-month prevalence of OCD was 2.9%. Among 70-year-olds, the prevalence of OCD was 1.3% in men and 4.5% in women. Depression was more common among those with OCD (34.6%) [23].

As very few studies have focused on the elderly population, there is a lacuna in data of mental disorders in elderly in Northern region of Saudi Arabia.

Objectives:-

This study was designed to study the demographic profile of elderly and to estimate the prevalence of previously diagnosed psychological diseases, its types and its determinants among the elderly population of Arar city, Kingdom of Saudi Arabia.

Participants and methods:-

The present cross sectional community based study was conducted in Arar city, the capital of Northern Borders Governorate on 138 elderly people of age 60 years and more. The sample size was calculated using the sample size equation: $n = z^2 p(1-p)/e^2$, considering target population more than 1000, and study power 95%. Systematic random sampling technique was followed. After identifying the first house randomly in the selected area, every 9th house was visited to include all the elderly subjects residing in those selected houses till the required sample is covered. Data was collected through personal interviews with the sampled elderly and filling the questionnaire which guided us to the data of socio-demographic characteristics such as age, sex, educational status and marital status, it also included smoking status and certain types of diseases that may be prevalent among elderlies suggested to affect psychological diseases such as diabetes mellitus and obesity. The questionnaire included also questions regarding the previously diagnosed psychological diseases, its types and its determinants, after ensuring the diagnosis by reviewing the accompanied health records and prescriptions and asking the caregivers about the case.

Ethical considerations:-

Data collector gave a brief introduction to the participants by explaining the aims and benefits of the study. Informed written consent was obtained from all participants. Anonymity and confidentiality of data were maintained throughout the study. There was no conflict of interest.

Statistical analysis:-

We utilized the statistical package for social sciences, version 16 (SPSS Inc., Chicago, Illinois, USA) to analyze the study data. The results were displayed as counts and percentages. The X² test was used as a test of significance, and differences were considered significant at P value less than 0.05.

Results:-

Table (1) illustrates the sociodemographic characteristics of the studied elderly population. The table showed that mean age (\pm SD) was 70 (\pm 9.25) years, male to female ratio was 47.8 to 52.2, married were 62.3% while 33.3% were widow, illiteracy constitutes 48.6% and 19.6% had primary education and 76.2% below the secondary education.

Table (2): illustrates the percentage distribution of psychological diseases in the studied elderly population. The total prevalence of psychological diseases among studied elderly population was 14.4%. Depression was 8.7%, Alzheimer's disease was 2.9% and obsessive compulsive disorder (OCD) was 2.9% too.

Table (3) illustrates smoking history, diabetes mellitus and BMI status in the studied elderly population. Current smokers were only 7.2%, 23.9% were ex-smokers while the majority (68.8%) were non smokers. Regarding D.M and obesity, diabetics were 37% and 45.7% were obese.

Table (3) illustrates the relationship between psychiatric problems and age group, sex, smoking history, diabetes mellitus and obesity among the studied elderly population. there is significant effect of age group ($P < 0.05$), but no significant effect of sex, educational level, marital status, smoking history, diabetes mellitus or obesity on the occurrence of psychiatric problems among the studied elderly population ($P > 0.05$).

Table (1): socio-demographic characteristics of the studied elderly population, Arar, 2016 (n = 138)

Age group	No.	%
60-	90	65.2
70-	36	26.1
80+	12	8.7
Mean age (\pm SD)	70 \pm 9.25	
Sex		
Female	72	52.2

Male	66	47.8
Marital status		
Married	86	62.3
Widow	46	33.3
Single	3	2.2
Divorced	3	2.2
Educational level		
Illiterate	67	48.6
Primary	27	19.6
Preparatory	11	8.0
Secondary	11	8.0
University or more	22	15.9

Table (2): Percentage distribution of psychological diseases in the studied elderly population, Arar, 2016 (n = 138)

Psychological diseases	No	%
Yes	20	14.4
Depression	12	8.7
Alzheimer's disease	4	2.9
Obsessive compulsive disorder (OCD)	4	2.9
No	118	85.6

Table (3): Disturbed sleep, smoking history, diabetes millets and BMI status in the studied elderly population, Arar, 2016 (n = 138)

Variables	No	%
Disturbed sleep		
Yes	35	25.4
No	103	74.6
Smoking history		
Non smoker	95	68.8
Smoker	10	7.2
Ex- smoker	33	23.9
Diabetes Millets		
Non diabetic	87	63.0
Diabetic	51	37.0
BMI (kg/m ²) status		
Non obese	75	54.3
Obese	63	45.7
Mean BMI (\pm SD)	29.99 \pm 9.73	

Table (3): The relationship between psychological diseases and age group, sex, educational level, marital status, smoking history, diabetes millets and obesity among the studied elderly population, Arar, 2016

Age group	Bronchial asthma		Total (n=138)	Chi-Square	P value
	Yes (n=20)	No (n=118)			
60-	8(40.0)	82 (69.5)	90 (65.2)	6.557	0.038
70-	9(45.0)	27(22.9)	36(26.1)		
80+	3(15.0)	9(7.9)	12(8.7)		
Sex					
Female	10(50.0)	62(52.5)	72(52.2)	0.044	0.512
Male	10(50.0)	56(47.5)	66(47.8)		
Educational level					
Illiterate	57(48.3)	10(50.0)	67(48.6)	0.405	0.982
Primary	23(19.5)	4(20.0)	27(19.6)		

Preparatory	9(7.6)	2(10.0)	11(8.0)		
Secondary	10(8.5)	1(5.0)	11(8.0)		
University or more	19(16.1)	3(15.0)	22(15.9)		
Marital status					
Married	77(65.3)	9(45.0)	86(62.3)	4.443	0.217
Widow	36(30.5)	10(50.0)	46(33.3)		
Divorced	2(1.7)	1(5.0)	3(2.2)		
Single	3(2.5)	0(0.0)	3(2.2)		
Smoking history					
Non smokers	11 (55.0)	84(71.2)	95(68.8)	2.954	0.228
Smokers	3 (15.0)	7(5.9)	10(7.2)		
Ex-smokers	6 (30.0)	27(22.9)	33(23.9)		
Diabetes Millets					
Diabetic	9(45.0)	42(35.6)	51(37.0)	0.650	0.286
Non diabetic	11(55.0)	76(64.4)	87(63.0)		
Obesity					
Non obese	10(50.0)	65(55.1)	75(54.3)	0.178	0.427
Obese	10(50.0)	53(44.9)	63(45.7)		

Discussion:

Ageing represents the accumulation of changes in a human being over time. In many Arab countries, psychological problems is not yet considered a major concern despite its increasing frequency and serious consequences. The present study is a descriptive cross sectional survey conducted on a representative sample of elderly people in the Northern Province of Saudi Arabia, well-known cultural barriers to discussing sensitive issues, especially with strangers, exist. Although some of the study sample refused to provide details on the psychological problems experienced, the information provided by the remaining elderly would form a basis for more in-depth and large scale studies in our region.

The present study showed that, the age of elderly ranges from 60-92 years with a mean age (\pm SD) was 70 (\pm 9.25) years, male to female ratio was 47.8 to 52.2. in southwest Saudi Arabia by Al-Modeer et al, the age of elderly ranges from 60-104 years with a mean of 77.2 ± 8.9 . Most of the studied elderly (55.9%) were females [25].

In the present study, married were 62.3% while 33.3 were widow, illiteracy constitutes 48.6%, primary school literates were 19.6% and total of 76.2% had less than secondary education. In Ibrahim et al in Jeddah, widowed elderly represented about one- fifth (21.8 %) of the sample which is less than our figure. The majority of elderly (78.4 %) had less than secondary education which is consistent with our figure [27]. Khadervalli et al [26] in their study reported only 27 % as illiterate and 31% as primary school literates, which is better than our figures.

The overall prevalence rate of depression observed in this study (8.7%) is lower compared to other studies. For example in Riyadh, Saudi Arabia, the prevalence of depression was 20% among primary health care patients.[13] In elderly patients (>60 years), depression is more prevalent (39%) as detected in a study conducted in KSA and included representative samples from each of the 5 administrative regions of the Kingdom (North, West, East, South and Central) [24]. Also elderly community-based studies reported a depression rate of 24.3% in Jordan [16], 25% in Kuwait [17], and 38.9% in Iraq [18]. However our figure is high compared to Al-Modeer et al, in southeast Saudi Arabia found the prevalence of depression among elderly was 1.6%. Other study in Abha City, Saudi Arabia showed a higher prevalence (4.6%) [19].

In developed countries, the prevalence of depression in the elderly was up to 9.4% in private households which is consistent with our result, and 14% in institutional settings [15].

In the present study, Alzheimer's disease was 2.9%. Al-Modeer et al, results showed that 21.4% of elderly had Alzheimer disease [25] which coincides with the percentage reported among elderly in Jeddah (25.6%).[27] Other international studies[28,29] showed prevalence (10.3% and 13% respectively). All of these results are higher than our result.

In the current study, the prevalence of obsessive-compulsive disorder (OCD) was 2.9%. In elderly residents in rural and urban population of Zulfi region, Saudi Arabia, it was found that, OCD was 4.35% in urban population and 1.52% in rural population [22] which are to some extent in accordance with our figure. In a study in elderly in Gothenburg, Sweden. It was found that, the prevalence of OCD was 2.9%. Among 70-year-olds. These results are in accordance with our result.

However, in the present study, there is no specific explanation to the low rate of Alzheimer's disease, obsessive-compulsive disorder (OCD) and depression, but it may be attributed to the difference of the study design and target population. Furthermore, our data were collected largely based on medical records, whereas the previous study employed 'Diagnostic Manual of Mental Disorders, fourth edition (DSM-IV)' for assessing depression. So, further studies are necessary to clarify this issue.

In our study, Interrupted sleep was found in (25.4%) of the studied elderly, in Fayoum, Egypt, Interrupted sleep was found in 54.7%, which is higher than our figure [30]. In another study carried out in Iran, insomnia was (34%), it was one of the most common symptoms among elderly people [31].

In the current study, the following sociodemographic measures were included in the analyses as independent variables: age, gender, marital status and education. The self-reported chronic medical conditions considered were diabetes, smoking status, and obesity [body mass index (BMI) ≥ 30]. There is significant effect of age group ($P < 0.05$), but no significant effect of sex, education, marital status, smoking, diabetes mellitus or obesity on the occurrence of psychiatric problems among the studied elderly population ($P > 0.05$).

The finding of non-significant relationship between sex and depression is not consistent with other studies that detected high prevalence of depression in women [13,24] Also In (Ibrahim et al, 2005) study, in Jeddah, psychological problems were more encountered among females and this agrees with results of Hafez et al, 2003 [27], this result may be attributed to different types of study participant population, and the use of different screening tools. The presence of chronic diseases such as diabetes mellitus and obesity had no significant relationship with psychological problems among the study group, a result that is consistent with a study conducted on primary healthcare patients in Qatar [32] but inconsistent with some other studies [33-35]. Most of the study group subjects were married (62.3%), a finding that can explain the absence of a significant relationship with marital status.

Conclusion and recommendations:

In light of the results of the present study; more research work is needed to assess objectively the psychiatric problems among the elderly population in Arar city, Northern Saudi Arabia and it seems reasonable to remain cautiously optimistic while continuing to work toward a full understanding of all factors determining the occurrence of all psychiatric problems among that vulnerable group.

Acknowledgement:

Fatimah Fahad Saad Altaleb, Hala Mohammed Alanazi, Muhammad Sari Alanazi, Naif Salem Alshammari, Omar Ayed Alanazi (6th year medical students, Northern Border University), and Abdalla Mohamed Bakr Ali for their help in different steps of the research.

References:

1. 2003, World Health Organization. Health care of the elderly in the Eastern Mediterranean Region: challenges and perspectives .WHO (Technical Paper EM/RC50/6).
2. Sibai A. The older persons: from veneration to vulnerability. In: Jabbour S et al., editors. Public health in the Arab world. New York: Cambridge University Press; 2012. p. 264–75
3. Orimo H, Ito H, Suzuki T, Araki A, Hosoi T, et al. (2006) Reviewing the definition of "elderly". *Geriatrics & Gerontology International* 6:149-58.
4. Sherif, Y.(2000): Cooperative cares for elderly in Egypt. In *Elderly on Arabic World-the current status and the future*, Helwan press, Cairo; : 17-36
5. 2008, World Health Organization/Wonca Integrating Mental Health into Primary Care: a global perspective Geneva: World Health Organization.
6. Taqui AM, Itrat A, Qidwai W, Qadri Z (2007) Depression in the elderly: does family system play a role? A cross-sectional study. *BMC Psychiatry* 7: 57.

7. Faris EA, Hamid AA (1995)Hidden and conspicuous psychiatric morbidity in Saudi primary health care. *Arab J Psychiatry*6:162-175.
8. Al-Khathami AD, Ogbiede DO (2002)Prevalence of mental illness among Saudi adult primary-care patients in Central Saudi Arabia. *Saudi Med J*23:721-724.
9. Alibrahim O, Al-Sadat N, Elawad N (2010)Gender and risk of depression in Saudi Arabia, a systematic review and meta-analysis. *Journal of Public Health in Africa*1.
10. El-Rufaie OE, Albar AA, Al-Dabal BK (1988)Identifying anxiety and depressive disorders among primary care patients: a pilot study. *ActaPsychiatrScand*77:280-282.
11. Alqahtani MM, Salmon P (2008)Prevalence of somatization and minor psychiatric morbidity in primary healthcare in Saudi Arabia: a preliminary study in Asirregion. *J Family Community Med*15:27-33.
12. Abdelwahid HA, Al-Shahrani SI (2011)Screening of depression among patients in family medicine in Southeastern Saudi Arabia. *Saudi Med J*32:948-952.
13. Becker S, Al Zaid K, Al Faris E. Screening for somatization and depression in Saudi Arabia: a validation study of the PHQ in primary care. *Int J Psychiatry Med* 2002; 32: 271-283.
14. Charney, D., Reynolds, C. and Lewis, L.(2003): Depression and Bipolar Support Alliance consensus statement on the unmet needs in diagnosis and treatment of mood disorders in late life. *Arch Gen Psychiatry*; 60: 664–672.
15. Djernes JK (2006) Prevalence and predictors of depression in populations of elderly: a review. See comment in *PubMed Commons* below *ActaPsychiatrScand* 113: 372-387.
16. Youssef RM (2005) Comprehensive health assessment of senior citizens in Al-Karak governorate, Jordan. *East Mediterr Health J* 11: 334-348.
17. AL-Baho AK (2003) Epidemiology of self-dependence among Kuwaiti elderly population of Abdullah Alsalem area. *Kuwait Medical Journal* 35: 98-104.
18. Ali NS, Hussein AA (2005) Depression in Elderly Patients Attending Primary Health Care Clinics in Baghdad City. *Arab Journal of Psychiatry* 16:107-117.
19. Abolfotouh MA, Daffallah AA, Khan MY, Khattab MS, Abdulmoneim I. Psychosocial assessment of geriatric subjects in Abha City, Saudi Arabia. *East Mediterr Health J*. 2001;3:481–91. [PubMed]
20. 2. Wimo A, Jonsson L, Winblad B. An estimate of the worldwide prevalence and direct costs of dementia in 2003. *Dement GeriatrCognDisord*. 2006;21:175–181. [PubMed]
21. 3. Brookmeyer R, Johnson E, Ziegler-Graham K, Arrighi HM. Forecasting the global burden of Alzheimer's disease. *Alzheimers Dement*. 2007;3:186–191. [PubMed]
22. Al Atram AR (2015) Prevalence of Psychiatric Disorders in a Sample of Elderly Residents in Rural and Urban Population of Zulfi Region - Saudi Arabia. *J PsycholPsychother* 5:170. doi: 10.4172/2161-0487.1000170
23. Klenfeldt IF, Karlsson B, Sigström R, Bäckman K, Waern M, Östling S, Gustafson D, Skoog . Prevalence of obsessive-compulsive disorder in relation to depression and cognition in an elderly population. *Am J Geriatr Psychiatry*. 2014 Mar;22(3):301-8. doi: 10.1016/j.jagp.2012.09.004. Epub 2013 Mar 13.
24. Shehatah A, Rabie MA, Al-Shahry A. Prevalence and correlates of depressive disorders in elderly with type 2 diabetes in primary health care settings. *J Affect Disord* 2010; 123: 197-201.
25. Al-Modeer M, Hassanien S, Jabloun C. Profile of morbidity among elderly at home health care service in Southern Saudi Arabia (2013). *J Family Community Med*, 20(1):53-57.
26. KhadervalliNagoor et al Comparative study of health status among slum and non slum elderly population in Kadappa region South India *Journal of Evolution of Medical and Dental Sciences* 2014 Vol3 issue 5 Feb 03 pg 1298-1307.
27. Ibrahim NK, Ghabrah TM, Qadi M. Morbidity profile of elderly attended/admitted in Jeddah health facilities, Saudi Arabia. *Bull High Inst Public Health*. 2005;35:173–90.
28. Evans DA, Funkenstein HH, Albert MS, Scherr PA, Cook NR, Chown MJ, et al. Prevalence of Alzheimer's disease in a community population of older persons. Higher than previously reported. *JAMA*.1989;262:2551–6. [PubMed]
29. Alzheimer's Association, 2010 Alzheimer's Disease Facts and Figures, Alzheimer's and Dementia. [Last accessed on 2011 Apr 18];6 Available from: <http://www.alz.org> .
30. Hassan SK. A Study of Morbidity Pattern among Geriatric Population in Fayoum Governorate, Egypt. *Journal of American Science* 2015;11(4).
31. Banker K1, Prajapati B, Kedia G: Study Of Health Profile Of Residents Of geiatric Home In Ahmedabad District *National Journal of Community Medicine*, 2 (3) 2011 Page 378.
32. Flamerzi S, Al-Emadi N, Al- Kuwari MG, Ghanim IM, Ahmad A. Prevalence and determinants of depression among primary health care attendees in Qatar 2008. *Middle East Journal of Family Medicine* 2010; 8: 3-8.
33. Sharp LK, Lipsky MS. Screening for Depression A cross the Lifespan: A Review of Measures for Use in Primary Care Settings. *Am Fam Physician* 2002; 66: 1001-1008.
34. Chen TM, Huang FY, Chang C, Chung H. Using the PHQ-9 for depression screening and treatment monitoring for Chinese Americans in primary care. *PsychiatrServ* 2006; 57: 976-981.
35. Löwe B, Schenkel I, Carney-Doebbeling C, Göbel C. Responsiveness of the PHQ-9 to Psychopharmacological Depression Treatment. *Psychosomatics* 2006; 47: 62-67.