

Screening of Mental Health Problems with GHQ-28 in a Sample of Turkish Community Dwelling Adult People

Hasibe Kadioğlu¹, Ayşe Ergün¹, Ayşe Yıldız²

¹Community Health Nursing Department, Marmara University, Nursing Division of Health Science Faculty, Istanbul - Turkey
²Halic University, Midwifery Division of Health Science Faculty, Istanbul - Turkey

Yazışma Adresi / Address reprint requests to: Hasibe Kadioğlu,
Marmara Üniversitesi Sağlık Bilimleri Fakültesi, Hemşirelik Bölümü, Haydarpaşa Yerleşkesi, Haydarpaşa 81326, Istanbul-Turkey
Elektronik posta adresi / E-mail address: hkadioglu@marmara.edu.tr
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ÖZET

Türk toplumu içinde bir grup erişkinin GSA-28 ile ruhsal sağlık problemlerinin taranması

Amaç: Bu çalışmanın amacı İstanbul'da toplum içinde yaşayan bireylerin ruhsal durumlarını ve etkileyen faktörleri incelemektir.

Yöntem: Bu tanımlayıcı çalışma İstanbul-Dudullu'da toplum içinde yaşayan ve psikiyatrik sorunu olmayan 972 birey ile yapıldı. Veriler Kasım 2007'de görüşme yöntemi ile toplandı. Psikolojik bozuklukları tanılamak için tarama aracı olarak 28 sorudan oluşan Genel Sağlık Anketi kullanıldı. Veriler tanımlayıcı istatistikler, Mann-Whitney U testi ve logistik regresyon analizi ile değerlendirildi. Anlamlılık düzeyi $p<0.05$ ve güven aralığı %95 olarak kabul edildi.

Bulgular: Araştırmaya katılan bireylerin yaşları 18 - 65 arasında değişmekte, yaş ortalaması 36.84 ± 13.22 'dir. Çoğunluğu kadın (82.5%), ev hanımı (72.9%) ve evlidir (86.1%). Katılımcıların %32'si (kadın=%34 erkek=%22) ruhsal sağlık sorunu açısından olası vaka olarak tanımlandı. Psikolojik bozukluk prevalansı kadınlarda, kronik hastalığı bulunanlarda istatistiksel olarak anlamlı yüksek bulundu. Kadınlarda ruhsal bozukluk oranı erkekler ile karşılaştırıldığında 1.64 kez daha yüksekti. Herhangi bir kronik hastalığı olanlar olmayanlara göre 2 kez daha riskliydi.

Sonuç: Kadın olmak, kronik hastalığı olmak ve sigortası olmamak ruhsal sağlık problemleri açısından riskli bulundu.

Anahtar sözcükler: Ruhsal sağlık, genel sağlık anketi, GSA-28

ABSTRACT

Screening of mental health problems with GHQ-28 in a sample of Turkish community dwelling adult people

Objective: In this study, our objective was to examine the mental health problems and the factors affecting their mental health in a Turkish primary care sample.

Method: This research was a descriptive study. Study population included 972 non psychiatric community-dwelling people in Dudullu-Istanbul of Turkey. Data were collected by interviewing in November of 2007. The 28- item General Health Questionnaire (GHQ-28) was used as a screening tool for the detection of mental disorders. The data were analyzed with descriptive statistics, Mann-Whitney U test and logistic regression. Significance was set at $p<0.05$ and confidence interval estimated at the 95% level.

Result: The mean age of respondents was 36.84 ± 13.22 with a range from 18 to 65 years. Most participants were female (82.5%), housewife (72.9%) and married (86.1%). Thirty two percent the people in the study (34% of the women and 22% of the men) were detected as likely cases. Prevalence was found statistically higher in females those who have any chronic diseases and no health insurance.

Females were 1.64 times more at the risk of mental disorders compared with males. Those who have any chronic diseases were 2 times more at the risk than those who haven't.

Conclusion: Female, those who have any chronic disease and no health insurance are at greater risk for mental health problems.

Key words: Mental health, general health questionnaire, GHQ-28

INTRODUCTION

Nowadays mental health is an undeniable part of general health and an important indicator for the health

status of a population (1). The World Health Organization (WHO) has warned that the international burden of mental /psychiatric disorders is already enormous (450 million) and continues to grow (2).

The problem of identifying mental disorders is increasingly recognized as an important health care issue and the early identification of patients at risk assumes considerable importance from the point of view of prevention of mental health problems (3). In addition, it is important to identify patients with clinically significant distress and to refer these patients for a more specific or detailed evaluation (4).

Several screening tools have been developed for mental disorders, but the General Health Questionnaire (GHQ) is certainly one of the most frequently used tools and has been used as a screening tool in a large amount of studies (5).

In this study, our objective was to examine the mental health problems and the factors affecting the mental health in a Turkish primary care sample.

MATERIALS AND METHODS

Procedure and Subjects

This research was a descriptive study. Study population included 972 non psychiatric community-dwelling people aged 18-65 years in a district area of Dudullu-Istanbul/Turkey. There has not been random sampling. Study population was constituted on the basis of consecutive voluntary participation. Data collection took place at participants' homes in November of 2007. Participants were informed about the general purposes of the study and asked to give their informed consent. Then, participants completed the GHQ and General Demographic Questionnaire, or, if they were not able to read or write, the questionnaire was administered verbally by research worker. For this study, permission was obtained from the provincial health directorate.

Tools

The following tools were used:

General Health Questionnaire 28 (GHQ)

The General Health Questionnaire is the most widely used screening instrument for detecting psychiatric disorders in community and non-psychiatric clinical settings (6). GHQ was developed by Goldberg in 1972 (7) and adapted to Turkish on the adult people who applied to

a primary health care service by Kilic in 1996 (6).

The GHQ has been used in excess of 38 languages and 50 countries (7). The 28-item version of the GHQ (GHQ-28) was used. The scaled GHQ is derived by factor analysis and consists of four subscales of seven items each: Somatic Symptoms (factor A), Anxiety and Insomnia (factor B), Social Dysfunction factor C), and Severe Depression (factor D). The questions ask subjects to compare their states in the past few weeks with their usual state, and measure the extent to which there was a discrepancy between the two. Responses were scored using GHQ scoring (0-0-1-1). This method is advocated by the test author. The items are summed to generate scale scores assuming that they represent the scale to the same degree (Cronbach's alpha for scale A=0.80, B=0.80, C=0.70, D=0.83 and total=0.90).

The GHQ comprises 28 items, 7 of which are formulated in a positive manner (e.g., Do you feel perfectly well and in good health?), and 21 of which are formulated in a negative manner (e.g., Do you feel sick?). In the case of the positive items, the following scale is used: 1=more than usual, 2=as usual, 3=less than usual, 4=much less than usual. In the case of the negative items, the following scale is used: 1=not at all, 2=not more than usual, 3=a little more than usual, 4=much more than usual. The remaining 3 items use two other types of response scale. The Turkish (adaptation) translation of the GHQ was used with a cut-off score for case of 5, at which level the questionnaire has a reported sensitivity of 74 percent and specificity of 70 percent (6). The User's Guide for the GHQ (7) recommends that the best threshold score is determined in each country or setting in which it is intended to be used. Kilic (1996) has reported sensitivity of 73.7 percent for cut-off point of 5. Therefore, cut-off point of 5 was used in this study.

General demographic questionnaire: The whole assessment included a socio-demographic questionnaire concerning data collection such as age, gender, marital status, level of education, employment status, chronic diseases and medication.

Data Analysis

Analyses were performed using the Statistical Package for the Social Science (SPSS) version 16. The data were analyzed with descriptive statistics, Mann-Whitney U test and logistic regression. Enter logistic regression was used to

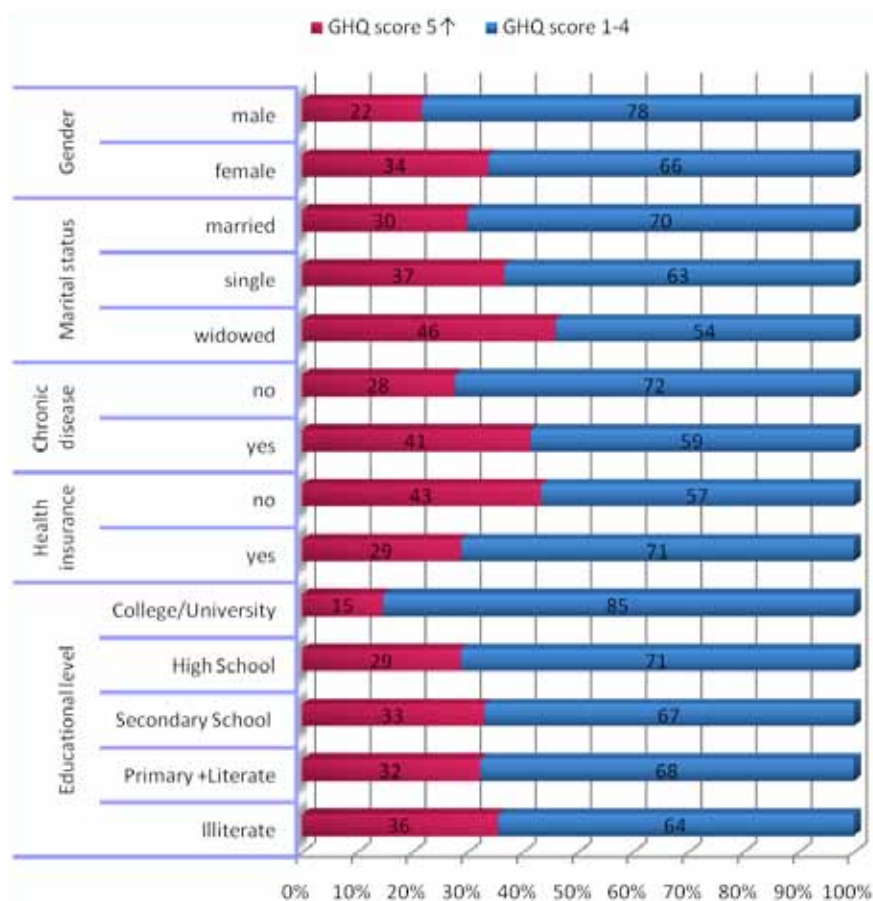
Table 1: The characteristic of respondents (n= 972)

Characteristics	n	%
Gender		
Male	170	17.5
Female	802	82.5
Age mean (SD)	36.8 (13.2)	
Marital status		
Married	837	86.1
Single	98	10.1
Widowed	37	3.8
Educational level		
Illiterate	107	11
Literate	52	5.4
Primary (1st - 5th grades)	532	54.7
Secondary (6th -8th grades)	115	11.8
High School (9th-12th grades)	132	13.6
University	34	3.5
Chronic Disease		
No	692	71.2
Yes 280	28.8	
Health insurance		
No	189	19.4
Yes	783	80.6
Total	972	100.0

examine the multivariate relationships between independent variables and mental health problems. Independent variables that entered in the model were age, gender, marital status, educational level, chronic disease and health insurance. Odds ratio (OR) and 95% confidence intervals (95% CIs) were calculated. Significance was set at $p < 0.05$.

RESULTS

The mean age of respondents was 36.84 ± 13.22 with a range from 18 to 65 years. The majority (57%) of the sample was between 25 and 44 years. Most participants were female (82.5%), housewife (72.9%) and married (86.1%). Fifty-five percent reported they had completed fifth grade and graduating from high school (13.6%). Eighty-one percent had some health insurance coverage. Twenty-nine percent reported they have a chronic disease. The characteristics of respondents and descriptive results were shown in Table I.

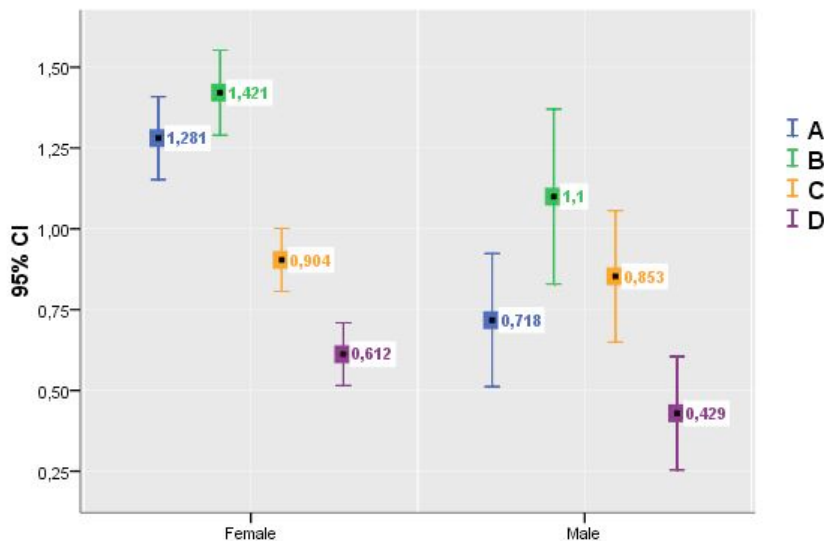
**Figure 1:** GHQ score according to descriptive variables

In our study, the cronbach's alpha of GHQ was found 0.90 and the subscales were between 0.70-0.83 (factor A=0.80, factor B=0.80, factor C=0.70, factor D= 0.83).

Thirty two percent of participants in the study (34% of the women and 22% of the men) were detected as likely cases. Prevalence was found statistically higher in female,

the single, widowed/divorced, of those who have any chronic disease and no health insurance (Figure 1).

The mean scores for GHQ according to gender are presented Figure 2. Factor A (somatic symptoms), factor B (anxiety and insomnia) and total scores of female was statistically higher than male ($p < 0.05$).



A=SomaticSymptoms ($p < 0.05$), B= Anxiety and Insomnia ($p < 0.05$) C= Social Dysfunction($p > 0.05$), D= Severe Depression($p > 0.05$)

Figure 2: Total and factor mean scores for GHQ according to gender

Table 2: Estimated multivariable logistic regression coefficients and odds ratios*

Variable	n (%)	B	p	Adjusted OR	95% CI
Age			0.09		
15-39	627 (64.5)		-	1.00	-
40-64	307 (31.6)	-0.86	0.621	0.917	0.65-1.29
65-90	38 (3.9)	0.729	0.069	2.073	0.94-4.54
Gender					
Male	170 (17.5)		-	1.00	
Female	802(82.5)	0.500	0.011	1.648	1.12-2.42
Marital status			0.296		
Married	837(86.1)		-	1.00	
Single	98(10.1)	0.300	0.121	1.448	0.90-2.31
Widowed or divorced	37(3.8)	0.076	0.833	1.079	0.53-2.18
Educational level			0.550		
University	34(3.5)		-	1.00	-
High School (9th-12th grades)	132(13.6)	0.554	0.222	1.740	0.71-4.23
Secondary School (6th -8th grades)	115(11.8)	0.852	0.064	2.345	0.95-5.77
Primary (1st - 5th grades)	532(54.7)	0.668	0.122	1.951	0.83-4.55
Literate	52(5.4)	0.558	0.28	1.747	0.63-4.82
Illiterate	107(11.0)	0.559	0.250	1.748	0.67-4.52
Chronic disease					
No	692(71.2)		-	1.00	-
Yes	280(28.8)	0.719	0.000	2.052	1.49-2.82
Health Insurance					
Yes	783(80.6)		-	1.00	
No	189(19.4)	0.550	0.001	1.733	1.24-2.41

*Variables entered in the model: age, gender, marital status, educational level, chronic disease, health insurance.

Female were 1.64 (95% CI=1.12-2.42) times more at risk of mental disorders compared with male. Those who have any chronic disease were two times (95% CI=1.49-2.82) at greater risk compared to those who haven't. Those who have not health insurance (1.73 times) (95% CI=1.24-2.41) were more at risk of mental disorders compared with people have health insurance (Table 2).

DISCUSSION

This study examined the relationship between mental health problems as measured by the GHQ-28 and some sociodemographic characteristics of community-dwelling people aged 18-65 years. GHQ is a self-administered screening questionnaire designed to detect probable psychiatric disorder in primary care settings which is highly popular and widely used in research (4,8-14,16-21).

The aim of the present study was to examine the mental health problems and the factors affecting their mental health in a Turkish primary care sample.

In this study, consistent with previous studies thirty two percent the people were detected as likely cases according to GHQ (22-25). On the other hand, in a Bangladesh study, probably prevalence of mental disorders was found 19.7 percent. This can be explained by the fact that the previous study was done in rural area. Our study was done the urban area. Living in urban area than rural life can be stressful. Therefore it can be a reason for mental disorders. Nevertheless, there is a need for future research in this field. We suggest investigate mental health problems in Turkish rural population.

The mean scores for total GHQ, Somatic symptoms, anxiety and insomnia was found statistically higher in

female and female were 1.64 times more at risk of mental disorders compared with male in this study. This is consistent with findings from similar studies (18,22-24,26,27).

Women in Turkey are often responsible for the daily welfare of their families. Daily activities such as survival, food, clothing, medical care, education and childrearing pose additional stress on their life.

The findings from analysis are consistent with previous studies showing a greater prevalence of mental health problems among single people compared with married people (22,27-29). The protective value of a partner's support is inevitable (23). For example, burdensome domestic work and economic hardship are more prevalent among single people than people living together. This should be taken into consideration when reporting differences in mental health symptoms between different family constellations (29).

CONCLUSION

As the results of the present study indicate, female, those who have any chronic disease and no health insurance are at greater risk for mental health problems.

Limitations

The females are a very large part of the working group. This is most important limitation of this study. This situation may limit the generalization of study results.

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