

Symptoms of anxiety, depression, and psychosocial factors in men seeking primary healthcare

M^a Consuelo Espinosa Muñoz,¹ Luz Adriana Orozco Ramírez,¹ José Luis Ybarra Sagarduy¹

Original article

ABSTRACT

Background

Anxiety and mood disorders are the cause of psychological deterioration in the world. In the case of men, specific somatic symptomatology can be present that indicate depression or anxiety but, because of their masculine socialization, they tend to suppress or minimize their psychological suffering or impose barriers that keep them from identifying their internal emotions and the symptoms of a serious mental issue.

Objective

The purpose of this was to determine whether there are significant relationships between symptoms of anxiety, depression and other psychosocial factors along with the consultation motive of the adult male population who demand first level health care.

Method

The sample considered for this study was 276 male subjects aged 18 to 65 who were attended as outpatients in various health institutions in Ciudad Victoria, Tamaulipas. With this sample, the Goldberg Scale of Anxiety and Depression and the Scale of Psychosocial Operation were used.

Results

It was found that 57% (n=157) were diagnosed with a prevalence of anxiety symptoms and 49% (n=135) were diagnosed with symptoms of depression. The results obtained confirm that among the factors that cause these symptoms are life stress, negative exchange among interactions, negative health habits and an economic income lower than 1 000 pesos.

Discussion and conclusion

These results also confirm the relationship among symptoms of anxiety, depression, psychosocial factors and deteriorating health.

Key words: Anxiety, depression, men, psychosocial factors, primary care.

RESUMEN

Antecedentes

Los trastornos de ansiedad y del estado de ánimo son causa de deterioro psicológico. En el caso específico de los hombres, pueden presentar sintomatología clínica somática de depresión y ansiedad, pero, debido a la socialización masculina, pueden sentirse inclinados a ocultar o minimizar su sufrimiento psicológico o imponerse barreras que les impidan identificar y comunicar emociones internas y mucho menos a valorar estas manifestaciones como indicadores de un problema de salud mental.

Objetivo

El presente trabajo tiene como objetivo determinar las relaciones existentes entre síntomas de ansiedad y depresión, factores psicosociales y el motivo de consulta en población adulta masculina que demanda atención de salud en primer nivel.

Método

Los participantes fueron 276 sujetos masculinos de 18 a 65 años atendidos en consulta externa de diversas instituciones de salud de Ciudad Victoria, Tamaulipas. Se aplicó a esta muestra la Escala de Ansiedad y Depresión de Goldberg y la Escala de Funcionamiento Psicosocial.

Resultados

Se encontró una prevalencia para síntomas de ansiedad de 57% (n=157) y de síntomas de depresión de 49% (n=135). Los resultados mostraron que entre los factores predictores de esta sintomatología se encuentran el estrés de vida, el intercambio negativo en sus interacciones, los hábitos negativos de salud y un ingreso económico menor a 1 000 pesos.

Discusión y conclusión

La presente investigación viene a confirmar una relación entre síntomas de ansiedad, depresión, factores psicosociales y el deterioro de la salud.

Palabras clave: Ansiedad, depresión, hombres, factores psicosociales, atención primaria.

¹ Academic Unit of Social Work and Sciences for Human Development. Autonomous University of Tamaulipas.

Correspondence: Mtra. Ma. Consuelo Espinosa Muñoz. Adolfo López Mateos University Center s/n, Autonomous University of Tamaulipas, 87000, Cd. Victoria, Tamps., Mexico. Phone: (834) 318-1730 Ext. 2242. E-mail: lapsicologaesconsuelo@hotmail.com

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BACKGROUND

In Mexico, the Secretary for Health (SSA) advises that in 2009, more than 209,000,000,000 general outpatient appointments were given in public health institutions, dealing with prenatal appointments, infectious diseases, and service users with chronic pathology.¹ However, only 1% of the population were seen because of mental health concerns.²

This data leads us to believe that mental conditions are still under-diagnosed in first-level healthcare. However, the National Survey on Psychiatric Epidemiology in Mexico (ENEP) reports that 28.6% of the Mexican population had one of the 23 mental disorders listed in the International Classification of Diseases (ICD), the most prevalent of which were anxiety disorders, substance abuse, and mood disorders.³

The individual, family, and social repercussions of these conditions generate a reduction in productivity. Empirical evidence of depression shows the incapacity it causes, which is greater than other chronic diseases such as diabetes or hypertension.⁴ It is also considered as one of the causes of healthy years of life lost.⁵ On the other hand, depression in comorbidity with a physical illness exacerbates pain and adherence to treatment.⁶

Furthermore, the presence of depression can negatively affect interpersonal relationships. In parents, for example, dysfunctional patterns in childhood have been associated with repercussions on the mental health of their children.^{7,8}

Women present these conditions more than men. According to ENEP data, there is a prevalence of any affective disorder of 11.2% in women and of 6.7% in men, and the prevalence of having an anxiety disorder at some time in life is 18.5% in women and 9.5% in men.³

The reasons for developing mental disorders are still not totally known, but it has been recognized that the etiology is multi-factorial and as such there are reasons to corroborate a diagnosis of anxiety or depression with biological⁹⁻¹¹ and psychosocial factors.¹²⁻¹⁷

Mental health in men has characteristics that merit special attention, and depression is a worrying aspect due to its correlation with suicidal behavior. In Mexico, the statistics reported 4388 suicides in both sexes in 2007. Anxiety, depression, stress, loneliness, desperation, social expectations, and feelings of rejection were all identified as causes.¹⁸

Federal bodies with the highest prevalence of suicides in men were in the north (Baja California, Sonora, and Chihuahua) and south-southeast (Tabasco, Campeche, and Quintana Roo) of the country. Even if it is true that more women attempt suicide, paradoxically more men actually end their own lives by using more lethal and irreversible means.^{18,19}

The symptomatic profile of depression in men is generally different to women, with a predominance of fatigue, insomnia, irritability, and loss of interest in work and free

time. Compared to women, depressed men express fewer feelings of sadness and are less prone to low self-esteem and to feelings of excessive guilt.²⁰

Epidemiological studies^{21,22} relate higher alcohol and drug abuse in men with anxiety and mood disorders. As such, instead of recognizing their symptoms, asking for help, or seeking appropriate treatment, men may turn to alcohol or drugs when they are depressed, frustrated, upset, angry, irritable, or sometimes violently abusive.²³ Others tend to seek refuge in work or in risky behavior.²⁴ Furthermore, there are cultural and social factors which put pressure on men to present an image of strength, and depression is considered a sign of weakness or lack of self-control, which could lead to feelings of sadness that are channeled through hostility.^{25,26}

This discomfort in men has not been widely recognized or approached.²⁷ Reasons for this could be due to measurement, as a gender bias present in many studies leads to under-recording anxiety and depression in men, given the characteristics of self-reports which seem to assess traits that are typically female, rather than anxiety and depression themselves.²⁸ On the other hand, men seek help for psychiatric problems less than women in both primary care and specialized services.²⁰ Reasons for this behavior are the way in which men perceive, assess, and communicate their symptoms,²⁹ and other examples of possible causes are fear of losing money or missing to work.³⁰

Taking the above into account, the present study centers on analyzing the relation of anxiety and depression symptoms with psychosocial factors and the reason for seeking consultation in a male population seeking primary care.

METHOD

This was a quantitative, non-experimental, cross-sectional study with a descriptive-correlational scope.

Participants

Some 276 male subjects aged between 18 and 65 participated in the study, who sought medical treatment in different healthcare institutions in Ciudad Victoria, Tamaulipas, Mexico.

To calculate the study sample, the primary care institutions were asked for the number of male patients who were treated in the previous month. With a total of 7490 male users seen per month, we then calculated the size of the representative sample, taking into account a maximum error of 5%, an estimated percentage of cases of 25%, according to previous studies,³¹⁻³³ and a confidence level of 95%. The resulting sample size required in order for the sample to be representative was 277 male users in the healthcare sector who attended centers seeking primary care medical treat-

ment. Once the sample was delimited, we then calculated the number of service users interviewed by institution, using a random sampling method stratified by simple fixing, considering as strata the different healthcare centers. Finally, patients were selected who attended the different centers through systematic random sampling.

The study was approved by the adjudication commission of the Teaching and Research Department at the Dr. Norberto Treviño Zapata General Hospital, the Clinical Hospital of the Social and Security Institute for the Service of State Workers (ISSSTE), and Health Jurisdiction N° 1 in Ciudad Victoria, Tamaulipas, Mexico.

The sociodemographic data (table 1) shows a predominant age range of 30 to 49 years (\bar{X} =43.35 SD=13.1), with a percentage of 43.1% (n=119). Some 73.6% (n=203) have a partner, and 93% (n=257) live in urban areas. Furthermore, 60% (n=164) of the men do not have professional studies (degree), which reflects on their economic perception, as 68% (n=189) have a salary of less than 5,000 pesos. Some 51.8% (n=143) live with their wife and children.

Instruments

An instrument was designed that contained the following questionnaires and scales:

- Questionnaire on Sociodemographic Data.* This asked questions on age, civil status, residential area, education, monthly income, and cohabitants.
- Goldberg Anxiety and Depression Scale*,³⁴ in Spanish, which has shown reliability and validity in the area of primary care and has a sensitivity of 83.1%, a specificity of 81.8%, and a predictive value of 95.3%.³⁵ It is a screening test which consists of two subscales: one for detecting symptoms of anxiety and another for symptoms of depression, made up of nine dichotomous (yes/no) questions. In the sample for this study, an alpha coefficient of internal consistency of 0.85 was obtained for symptoms of anxiety, and 0.83 for symptoms of depression.
- Psychosocial Functioning Scale (PFS).* This assesses the integral functioning of health in the Mexican population.³⁶ It consists of 37 Likert-type questions with five response options which assess three areas of social functioning (SF) such as life stress, coping, and social support. The subscale of life stress covers three aspects: a) the number of stressful events during the previous year, b) perceived stress, and c) overall stress. This subscale has 18 questions with dichotomous (yes/no) responses. If the response confirms that the event has occurred, the level of tension perceived must be indicated on a five-point scale. The subscale showed a Cronbach's internal consistency of 0.73. Coping was measured with six questions which identified coping with problems and emotions in a Likert-type format with a Cronbach's

alpha of 0.75. Social support was measured with 13 questions on emotional, tangible, and informational support, and Cronbach's alpha coefficient was over 0.80. A subscale of four questions with an alpha of 0.77 was used to make operational the negative exchanges defined as unpleasant encounters characterized by conflicts, excessive demands, and/or criticisms.

- Health Functioning Scale (HFS).*³⁶ This only used the subscale that measures positive and negative habits in health and reveals behavioral patterns related with substance use, eating habits, and exercise, which allows excesses or shortcomings in healthy behavior to be identified. This subscale consists of 24 Likert-type questions: 14 for positive habits (α =0.64) and 10 for negative habits (α =0.60).
- Brief Questionnaire to Identify Reason for Appointment,* which has four open questions.

Table 1

	\bar{X} = 43.35	TD= 13.1
	n (276)	%
Descriptive characteristics		
<i>Age</i>		
18-29	51	18.5
30-49	119	43.1
50-65	105	38.0
<i>Civil status</i>		
Married	179	64.0
Common law	24	8.7
Widowed	7	2.5
Single	52	18.8
Separated	12	4.3
<i>Residential area</i>		
Urban	257	93.0
Rural	19	7.0
Sociodemographic characteristics		
<i>Level of education</i>		
Primary	61	23.0
Secondary	41	14.0
High school	34	12.0
Technical school	25	9.0
Professional	112	40.0
<i>Monthly income</i>		
Less than 1,000	26	9.4
Between 1,000-3,000	72	26.0
Between 3,000-5,000	91	33.0
Between 5,000-10,000	60	21.0
10,000 or more	27	9.8
<i>Cohabitants</i>		
Wife and children	143	51.0
In a relationship without children	47	16.0
Parents and children	19	7.0
Parents	22	8.0
Alone	20	7.0
Others	35	22.0

At the end of the questionnaire, three questions were used to identify whether the interviewee attended for psychological treatment or had received a diagnosis of anxiety or depression.

Procedure

A pilot was carried out on 45 participants to verify the reliability of the instruments used, as well as the understanding of the questions. They were then applied to the whole sample, and the interviews were carried out by the researcher themselves and one collaborator (both with degrees in Psychology). Participants were selected in waiting rooms through random sampling before going into their appointment with the doctor. They were invited to participate voluntarily. Anyone who agreed to participate was given an informed consent form and the researcher then asked them to read instructions before the complete instrument was applied through a structured interview which lasted between 40-50 minutes.

RESULTS

Frequency of symptoms of anxiety, depression, psychosocial factors, and reason for appointment

According to the results, it can be summarized that of the men who sought treatment in primary healthcare centers in Ciudad Victoria, 57% (n=157) had symptoms of anxiety (\bar{X} =4.04; TD=2.97) and 51% (n=141) had symptoms of depression (\bar{X} =2.21; TD=2.52) (table 2). Furthermore, 42% (n=115) of the interviewees had mixed symptoms of both anxiety and depression.

In terms of psychosocial factors, it was observed that the interviewed men advised having experienced three stressful life events in the last year with an average of (\bar{X} =3.39; DT=2.28), namely: financial problems (\bar{X} =1.49; TD=1.86), serious illness in the family (\bar{X} =1.43; TD=1.86), or death of a friend or family member (\bar{X} =1.23; TD=1.69). In terms of coping methods, the most frequently used resources for stressful events are trying to solve problems (\bar{X} =4.18; TD=.77), trying to feel better (\bar{X} =4.07; TD= .84), trying to better understand the situation (\bar{X} =3.77; TD= .89), trying to control the situation (\bar{X} =3.71; TD=.91), keeping calm (\bar{X} =3.36; TD=1.02), and accepting their feelings (\bar{X} =3.26; TD=1.06).

In terms of the social support (emotional, tangible, and informational) perceived in stressful moments, the men advised receiving above average social support, identifying emotional support as being received the most (\bar{X} =11.46; TD=2.84), expressed in affection and being highly regarded by their wives, children, family members, and friends. In contrast, they referred to negative exchange (\bar{X} =7.98; TD=3.46) rarely in their social interactions.

In terms of healthcare habits, on average the men referred to positive behaviors (\bar{X} =41.21; TD=7.19) which contributed to maintaining good health, as well as negative behaviors (\bar{X} =20.95; TD=5.52) which compromised their state of health or worsened it if living with a chronic disease.

Regarding reason for the appointment, 48% (n=132) of the men referred to seeing their primary care physician for chronic illness (hypertension, diabetes, epilepsy, etc.) and 52% (n=144) were there for other non-chronic conditions (infections, aches and pains, and other things). In terms of frequency, 50.6% (n=140) sought this type of care on a monthly basis.

Relation of anxiety and depression symptoms with sociodemographic variables

Chi-squared analysis was carried out to see the possible association of sociodemographic variables with symptoms of anxiety and depression. No association was found between the variables of civil status, residential area, and cohabitants with the variables of symptoms of anxiety and depression ($p>0.05$). However, there was an association found between the variable of symptoms of depression and the variables of age ($X^2=11.049$, $p=0.004$) and monthly income ($X^2=21.815$, $p<0.001$).

Relation of anxiety and depression symptoms with psychosocial factors

The relationship between anxiety and depression symptoms and psychosocial factors is described in table 3. The results indicate significant relationships, where the greater the symptomatology of anxiety and depression, the more stressful events, perceived stress, negative exchanges, and

Table 2. Psychosocial factors, stress, coping mechanisms, and social support

	\bar{X}	TD	Score	
			Minimum	Maximum
Stressful events	3.39	2.28	0	17
Perceived stress of events	10.34	8.22	17	85
Overall stress	2.89	.89	1	5
Perceived events with most stress				
Financial problems	1.49	1.86	1	5
Illness of a family member	1.43	1.86	1	5
Death of a relative or friend	1.23	1.69	1	5
Coping mechanisms	22.35	3.62	6	30
Social support				
Total social support	31.49	7.93	9	45
Informative social support	10.54	3.27	3	15
Emotional social support	11.46	2.84	3	15
Tangible social support	9.49	3.39	3	15
Negative exchanges	7.98	3.46	4	20
Health habits				
Positive habits	41.21	7.19	0	70
Negative habits	20.95	5.52	0	50

Table 3. Relation between anxiety and depression symptoms and psychosocial factors

	Total of stressful events	Perceived stress of events	Coping mechanisms	Positive social support	Negative social exchange	Positive health habits	Negative health habits
Anxiety	.354**	.466**	.001	-.157**	.322**	-.238**	.285**
(Bilateral sig.)	.000	.000	.984	.009	.000	.000	.000
Depression	.324**	.459**	-.039	-.220**	.272**	-.193**	.127*
(Bilateral sig.)	.000	.000	.524	.000	.000	.001	.034
n	276	276	276	276	276	276	276

* The correlation is significant to level 0.05 (bilateral).
 ** The correlation is significant to level 0.01 (bilateral).
 *p<0.05, **p<0.01.

negative health habits are present. In terms of negative relationships, it was noted that when there is greater symptomatology of anxiety and depression, there is less social support and fewer positive health habits.

Relationship between reason for appointment and symptoms of anxiety and depression

In terms of the relationship between the reason for appointment and symptoms of anxiety and depression (Figure 1), there was a significant relationship observed ($\chi^2=4.703$, $g^1=1$, $p=0.030$) with symptoms of anxiety, where both men who saw a doctor because of a chronic condition as well as those who sought treatment for a non-chronic illness had symptoms of anxiety, and patients being seen for non-chronic conditions had a higher rate of anxiety than those who had chronic illness. No significant relationship was found between the reason for the appointment and symptoms of depression ($\chi^2=2.92$, $g^1=1$, $p<0.088$).

Psychosocial variables that predict symptoms of anxiety and depression in men

Table 4 shows the variables predicting having symptoms of anxiety, which are: *perceived stress from events* (Exp [B]=1.121,

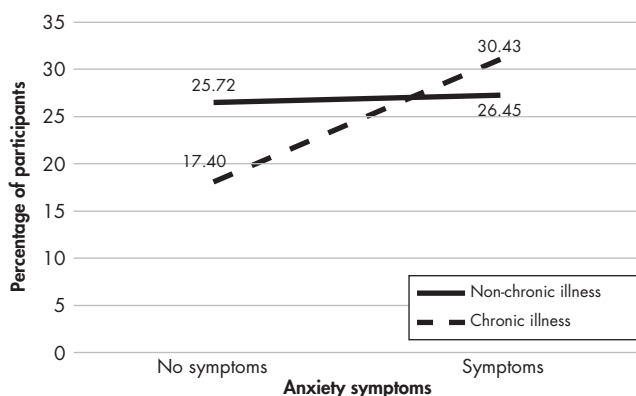


Figure 1. Relationship between presenting anxiety symptoms or not, and reason for consultation.

CI of 95% [1.073, 1.170], $p<0.001$), *negative exchanges* (Exp [B]=1.104, CI of 95% [1.011, 1.205], $p=0.028$) and *total negative health habits* (Exp [B]=1.067, CI of 95% [1.010, 1.126], $p=0.020$). In terms of this model's goodness of fit, the significant change in deviation shows an overall fit ($\chi^2=61.351$, $p<0.001$), confirmed with the Hosmer-Lemeshow test ($\chi^2=10.613$, $p=0.225$), which allows a correct estimation in 70.3% of cases. On the other hand, Nagelkerke's R^2 coefficient indicates that 26.7% of the variability in the dependent variable is explained by the logistical regression model.

The predictive variables of presenting symptoms of depression are: *perceived stress of events* (Exp [B]=1.099, CI of 95% [1.056, 1.144], $p<0.001$), *negative exchanges* (Exp [B]=1.126, CI of 95% [1.036, 1.225], $p<0.01$) and *income*, where an important risk factor for presenting symptoms of depression is having an income below 1000 pesos a month (Exp [B]=9.170, CI of 95% [2.232, 37.676], $p<0.01$). In terms of this model's goodness of fit, the significant change in deviation shows an overall fit ($\chi^2=67.440$, $p<0.001$), confirmed with the Hosmer-Lemeshow test ($\chi^2=3.787$, $p=0.876$), which allows a correct estimation in 70.5% of cases. On the other hand, Nagelkerke's R^2 coefficient indicates that the logistical regression model explains 29% of the variance of the dependent variable.

DISCUSSION AND CONCLUSION

This investigation sought to advance understanding of the social framework, focusing on life events in relation to symptoms of anxiety or depression in men. It should be clarified that Mexico has little epidemiological information of mental disorders in primary care, and according to De la Fuente,³⁷ to make an estimation of the mental disorders affecting the population, three sources are available: specialized institutions, external consulting services in general hospitals, and primary care and treatment units.

The results indicate that five out of 10 men participating in this study had symptoms of anxiety and depression. Furthermore, four out of 10 already presented mixed symptoms (both anxiety and depression). Using a methodology analo-

Table 4. Logistical regression model for variables of symptoms of anxiety and depression

	B	S.E.	Wald	sig	Exp (B)	INF	95% I.C SUP
Anxiety							
Perceived stress of events	.114	.022	26.491	.000	1.121	1.073	1.170
Negative exchanges	.099	.045	4.831	.028	1.104	1.011	1.205
Total negative habits	.065	.028	5.451	.020	1.067	1.010	1.126
Depression							
Perceived stress of events	.094	.020	21.711	.000	1.099	1.056	1.144
Negative exchanges	.119	.043	7.694	.006	1.126	1.036	1.223
Income (less than 1,000 monthly)	2.216	.721	9.446	.002	9.170	2.232	37.676

gous with this study, Enriquez et al³³ studied the prevalence of depressive symptoms in outpatient services at primary care level in the Institute of Public Health in Guanajuato State, and identified in men a greater proportion in the group of moderate depression, with 43.75%, and the lower proportion in the group of severe depression, with 25%, and it was concluded that the prevalence found between genders was similar.

As such, it is imperative to carry out a psychosocial analysis with screening instruments of service users who attend their general physician for any reason, given that anxiety and mood disorders are more frequent in primary care,^{32,38} allowing for a differential diagnosis that is indispensable for better treatment options.

In this study, men with symptoms of anxiety, depression, or both advised having experienced more stressful events in the past year and more overall stress; similar results to those reported by studies carried out in the US and Canada.^{39,40}

Participants perceived the following as important stressors: financial problems, serious illness in a family member, and the death of a friend or relative. Taking the sociodemographic data from the sample studied, a low level of education was observed (60% without university studies) and low monthly income (68% perceived less than 5,000 pesos). Coupled with this, socioeconomic conditions in the country put formal employment at risk, which is reflected in the unemployed population of young people as well as displaced adults who do not manage to enter the job market.⁴¹ These are experiences which become sources of discomfort or uncertainty in men, with repercussions on their gender identity of being financial providers. In this respect, as can be seen in this study, both age and monthly income are related with the presence of depression symptoms. This data coincides with other studies^{42,43} which identify unemployment, a low level of education, or a lower-level job as risk factors to anxiety and depression. Furthermore, epidemiological studies have consistently demonstrated that psychiatric disorders impact the socioeconomic level of those who have such conditions.^{44,45}

The results in terms of social support strengthen the empirical evidence of the relationship that it has with the direct promotion of good mental and physical health, increasing resistance to chronic stress and important life events. The results indicate that men refer to a deterioration in their perception of positive social support when there are greater symptoms of anxiety and depression. This association found in other investigations has shown lower rates of recovery from depression in patients who perceive a lack of social support, particularly in middle-aged men.⁴⁶ In terms of physical health, a deficit of social support is associated with cardiovascular health, including myocardial infarction and cerebrovascular accidents,^{47,48} and it can also make adherence to medication more difficult.⁴⁹

In terms of negative social exchanges, the results indicate that men who reported symptoms of anxiety or depression experienced more rejection, criticism, and insensitivity from those around them; they also perceived more stress from events and life in general.

In terms of the reason for seeking consultation and symptoms of anxiety and depression, both men who attended the doctor for a chronic condition as well as those who sought treatment for a non-chronic illness had symptoms of anxiety, which increases these symptoms in men who had a chronic illness. However, this relationship was not found for symptoms of depression.

The results indicated that psychosocial factors that are predictors of risk of presenting symptoms of anxiety and depression in men, are those which are associated with greater perceived stress and more negative exchanges, and in anxiety symptoms only, another risk factor is having bad health habits. However, in symptoms of depression, a psychosocial risk factor is having a monthly income of less than 1 000 pesos.

It is notable that there is a pressing need for research into both the prevalence and treatment of male mental health, as there is a relative scarcity of studies centered on men's experience, which causes various public health problems.^{50,51} First, estimations based on the population indicate that there is a significant number of men who are living

with depression. On the other hand, investigations into male mental health consistently demonstrate that men attend mental health services less frequently than women;⁵² they also advise that major depression could be masked.⁵³ As such, untreated mental pathology in men becomes a risk factor due to its negative consequences not only for the men themselves, but for the women, children, and communities around them.⁵⁴

Within the limitations of this study that must be taken into account for future research is that the instrument used to measure anxiety and depression is a screening of symptoms, and not a diagnosis of disorders. Furthermore, male service users who wished to participate were few, and open spaces such as waiting rooms could have influenced the veracity of participants' responses.

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Conflict of interest

The authors do not declare any conflict of interest.

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REFERENCES

1. Secretaría de Salud. Rendición de cuentas en salud 2009. México, DF: Secretaría de Salud de México; 2010. Available at: <http://www.dged.salud.gob.mx> (Access date: September 20, 2012).
2. Secretaría de Salud. Perfil epidemiológico de la salud mental en México. México, DF: Secretaría de Salud de México; 2012. Available at: <http://www.epidemiologia.salud.gob.mx> (Access date: January 8, 2013).
3. Medina-Mora ME, Borghes G, Lara-Muñoz C, Benjet C et al. Prevalencia de trastornos mentales y uso de servicios: Resultados de la Encuesta Nacional de Epidemiología Psiquiátrica en México. *Salud Mental* 2003;26(4):1-16.
4. Cassano P, Fava M. Depression and public health: an overview. *J Psychosom Res* 2002;53(4):849-857.
5. Organización Mundial de la Salud. Informe sobre la salud en el mundo 2001. *Salud mental. Nuevos conocimientos. Nuevas esperanzas.* OMS. Ginebra: 2001. Available at: http://www.who.int/whr/2001/en/whr01_djmessage_es.pdf (Access date: October 23, 2012).
6. Egede LE, Zheng D, Simpson K. Comorbid depression is associated with increased health care use and expenditures in individuals with diabetes. *Diabetes Care* 2002;25(3):464-470.
7. Cuervo A. Pautas de crianza y desarrollo socioafectivo en la infancia. *Divers: Perspect Psicol* 2010;6(1):111-121.
8. Sánchez MJ. Efectos traumáticos de la ausencia o disfunción paterna en un grupo de hombres adictos en tratamiento. En: Libro de ponencias: XXIV Conferencia Mundial de Comunidades Terapéuticas. Lima; Instituto del Mundo Libre; 2009; p.36-38.
9. Davies W, Isles A, Wilkinson L. Imprinted genes and mental dysfunction. *Ann Med* 2001;33:428-436.
10. Rin JL, Zinder M. Sexual dimorphism in mammalian gene expression. *Trend Genetics* 2005;21:298-305.
11. Karasu TB, Docherty P, Gelenberg A, Kupfer J et al. Practice guideline for major depressive disorder in adults. *American J Psychiatry* 1993;150(1):1-26.
12. Kendler K, Gatz M, Gardner C, Pedersen N. Personality and major depression: a Swedish longitudinal, population-based twin study. *Arch Gen Psychiatry* 2006;63(10):1113-1120.
13. Álvaro J, Garrido A, Schweiger I. Causas sociales de la depresión: una revisión crítica del modelo atributivo de la depresión. *Revista Internacional Sociología* 2010;68(2):333-348.
14. Kendler K, Gardner Ch, Prescott C. Toward a Comprehensive developmental model for major depression in men. *Am J Psychiatry* 2006;163(1):115-124.
15. Kendler K, Gardner Ch, Prescott C. Toward a comprehensive developmental model for major depression in women. *Am J Psychiatry* 2002;159(7):1133-1145.
16. Hamalainen J, Kaprio J, Isometsa E, Heikkinen M et al. Cigarette smoking, alcohol intoxication and major depressive episode in a representative population sample. *J Epidemiol Community Health* 2001;55(8):573-576.
17. Montero I, Aparicio D, Gómez-Beneyto M, Moreno-Kustner B et al. Género y salud mental en un mundo cambiante. *Gaceta Sanitaria* 2004;18(1):175-181.
18. Hernández H, Flores R. El suicidio en México. *Papeles Población CIEAP/UAEM* 2011;68:69-101.
19. Borges G, Orozco R, Benjet C, Medina-Mora ME. Suicidio y conducta suicida en México: retrospectiva y situación actual. *Salud Pública Mex* 2010;52(4):292-304.
20. Cochran SV, Rabinowitz FE. Gender-sensitive recommendations for assessment and treatment of depression in men. *Professional Psychology: Research Practice* 2003;34(2):132-140.
21. Milani R, Parrott A, Turner J, Fox H. Gender difference in self-reported anxiety, depression, among ecstasy - MDMA polydrug users, alcohol, tobacco users, and nondrug users. *Addictive Behaviors* 2004;29:965-971.
22. Medina-Mora ME, Rojas E, Borges G, Vázquez-Pérez et al. Comorbidity: Depression and substance abuse. En: Aguilar-Gaxiola S, Gullotta T (eds.). *Depression in Latinos. Assessment, treatment and prevention.* New York: Springer, 2008.
23. NIMH [sede web]. Bethesda, MD: Instituto Nacional de Salud Mental de Estados Unidos; 2012. Los hombres y la depresión. Available at: <http://www.nimh.nih.gov/health/publications/espanol/los-hombres-y-la-depresi-n/index.shtml> (Access date: December 19, 2012).
24. Schaffano F, Di Furia L, Forza, G, Minicuci N et al. MDMA (ecstasy) consumption in the context of polydrug abuse: a report on 150 patient. *Drug Alcohol Depend* 1998;52(1):85-90.
25. Cochran SV. Evidence-based assessment with men. *J Clinical Psychology* 2005;61(6):649-660.
26. Iwamoto DK, Gordon DM, Oliveros A, Pérez-Cabaello MA et al. The role of masculine norms and support on mental health in incarcerated men. *Psychology Men Masculinity* 2012;13(3):283-293.
27. Fleiz C, Sugiyama E, Medina-Mora ME, Ramos L. Los malestares masculinos: narraciones de un grupo de varones adultos de la ciudad de México. *Salud Mental* 2008;31(5):381-390.
28. Agudelo D, Buela-Casal G, Spielberg Ch. Ansiedad y Depresión: El problema de la diferenciación a través de los síntomas. *Salud Mental* 2007;30(2):33-41.
29. Brownhil S, Wilhelm K, Barclay L. Big build: Hidden depression in men. *Aust N Z J Psychiatry* 2005;39(10):921-931.
30. Lara A, Medina-Mora ME, Salgado N, Acevedo M et al. Utilización de los servicios para problemas de salud mental en población femenina: Tres estudios. *Salud Mental* 1996;19(2):42-49.

31. Gabarrón E, Vidal J, Haro J, Boix I et al. Prevalencia y detección de los trastornos depresivos en atención primaria. *Aten Primaria* 2002;29:329-337.
32. Terluin B, Brouwers EPM, Van Marwijk, HWJ, Verhaak PMF et al. Detecting depressive and anxiety disorders in distressed patients in primary care; comparative diagnostic accuracy of the four-dimensional symptom questionnaire (4DSQ) and the Hospital Anxiety and Depression Scale. *BMC Family Practice* 2009;10:58.
33. Enríquez JF, Gonzalez FE, Manríquez PA, Rivera AE et al. Prevalencia de depresión en usuarios de los servicios ambulatorios de salud en el Estado de Guanajuato. *Pensamiento Psicológico* 2010;7(14):53-61.
34. Goldberg D, Bridges K, Duncan-Jones P, Grayson D. Detecting anxiety and depression in general medical settings. *Br Med J* 1988;297(6653):897-899.
35. Montón C, Pérez-Echevarría MJ, Campos R, García-Campayo J et al. Escala de ansiedad y depresión de Goldberg: una guía de entrevista eficaz para la detección del malestar psíquico. *Aten Primaria* 1993;12(6):345-349.
36. Ramírez M, Cortés E, Vaquero J, Arriaga Y. Evaluación de requerimientos de salud integral en población mexicana. *Psicología Ciencia Social* 2003;5(2):68-75.
37. De la Fuente R, Medina-Mora ME, Caraveo J. Salud mental en México. México, DF: Instituto Mexicano de Psiquiatría/Fondo de Cultura Económica; 1997; pp.183-201.
38. González S, Fernández C, Rodríguez J, Amigo I. Prevención secundaria de la depresión en atención primaria. *Psicothema* 2006;18(3):471-477.
39. McLaughlin KA, Conron KJ, Koenen, KC, Gilman SE. Childhood adversity. Adult stressful life events and risk of post-year psychiatric disorder. A test of the stress sensitization hypothesis in a population-based sample of adults. *Psychol Med* 2010;40(10):1647-1658.
40. Turner R, Lloyd D. Lifetime traumas and mental health: the significance accumulative adversity. *J Health Soc Behav* 1995;36(4):360-376.
41. Samaniego N. La crisis, el empleo y los salarios en México. *ECONOMIAunam* 2010;6(16):57-67.
42. Zimmerman FJ, Christakis DA, Vander A. Tinker, tailor, soldier, patient: work attributes and depression disparities among young adults. *Social Science Medicine* 2004;58(10):1889-1901.
43. Bello M, Puente E, Medina-Mora ME, Lozano R. Prevalencia y diagnóstico en depresión en población adulta en México. *Salud pública México* 2005;47(51):S4-S11.
44. Dohrenwend BP. Overview of the evidence for the importance of adverse environmental conditions in the causation of psychiatric disorders. En: Dohrenwend BO (Ed.). *Adversity, stress and psychopathology*. New York: Oxford University Press; 1998; pp.523-38.
45. Dohrenwend BP. The role of adversity and stress in psychopathology: some evidence and its implications for theory and research. *J Health Soc Behav* 2000;41:1-19.
46. George LK, Blazer DG, Hughes DC, Fowler N. Social support and the outcome of major depression. *Br J Psychiatry* 1989;154:478-485.
47. Lett HS, Blumenthal JA, Babyak MA, Catellier DJ et al. Dimensions of social support and depression in patients at increased psychosocial risk recovering from myocardial infarction. *Int J Behav Med* 2009;16(3):248-258.
48. Dafer RM, Rao M, Shareef A, Sharma, A. Poststroke depression. *Top Stroke Rehabil* 2008;15(1):13-21.
49. Hansen NB, Vaughan EL, Cavanaugh CE, Connell CM et al. Health-related quality of life in bereaved HIV-positive adults: relationships between HIV symptoms, grief, social support, and Axis II indication. *Health Psychol* 2009;28(2):249-257.
50. Ellison Ch, Zhang W, Krawe N, Marcum J. Does Negative Interaction in emotional the church Increase Depression? Longitudinal finding from the Presbyterian panel survey. *Social Relig* 2010;70(4):409-431.
51. Becoña E, Vázquez F, Oblitas L. Promoción de los estilos de vida saludables. *Investigación en Detalle [revista en internet]* 2004; Número 5. Available at: <URL:<http://www.alapsa.org/detalle/05/index.htm>> (Access date: November 14, 2012).
52. Addis M, Cohane G. Social scientific paradigms of masculinity and their implication. *J Clinical Psychology* 2005;61(6):633-647.
53. Lidice J, Valdes Y, Quevedo C, Torres V et al. Depresión oculta en sujetos que laboran en condiciones complejas. *Rev Cubana Med Milit* 2007;36(2):1-6.
54. Calvete E. Características de salud mental de los hombres que maltratan a sus parejas. *Rev Esp Sanid Penit* 2008;10:49-56.