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The association of gynecological symptoms with psychological distress in women of reproductive age: a survey from gynecology clinics in Beirut, Lebanon

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Abstract

To date there has been no previous research into a possible association between psychological distress and gynecologic symptoms in the Arab world. We hypothesized that psychological distress would be associated with specific gynecologic complaints as well as with psychosocial factors.

We conducted a cross-sectional study of women attending gynecology clinics in Beirut, Lebanon. The study sample consisted of 355 women aged 18 to 49 years who were seeking healthcare from gynecologists affiliated with two general teaching hospitals in Beirut. Psychological distress was assessed using the General Health Questionnaire (GHQ). Gynecologic complaints were assessed by asking women about presenting gynecologic symptoms.

Women who visited the gynecologists for specific complaints, for post-surgical follow-up, or for insertion of coils or other services were more likely to be distressed than women who were attending for a general checkup ($\chi^2 = 9.466$, $p = 0.024$). About 50% of women who reported abdominal pain or breast pain also reported significant psychological distress. Only bleeding and infertility were not significantly associated with psychological distress.

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It is concluded that a high proportion of women who attend gynecology clinics with specific complaints report psychological distress. Our findings highlight the importance of considering the psychological component of gynecological morbidity.

Keywords

psychological distress; psychiatric epidemiology; gynecology; primary health care

INTRODUCTION

Depression is recognized as a major factor contributing to disability around the world¹. Women tend to be disproportionately affected by disability and depression, both of which are major threats to a good quality of life and the ability to sustain family life. We know that most people with psychiatric disturbances do not consult a mental health specialist^{2,3}. Since the work of Michael Shepherd focussed attention on the nature and prevalence of psychiatric disturbances in primary healthcare settings⁴, major initiatives by the World Health Organization have been implemented in order to study mental health in primary care settings around the world^{5–7}. Despite the gender differences in the prevalence and incidence of depression^{8–10}, few studies have been conducted in practices composed primarily of women – that is, gynecological practices.

The few studies that have investigated the problem of psychological distress in gynecology outpatient clinics have found that on average about 50% of women who attend these clinics are estimated to show higher levels of psychological distress than have been found in studies of other general hospital outpatient clinics¹¹. Gynecology clinics are an important outpatient setting because gynecologists provide services for women of reproductive age and beyond, thus functioning as primary care providers for many women¹². We could find only 12 studies of psychological distress and psychiatric comorbidity among women attending to gynecology clinics^{13–24}. Of these, only two studies were conducted in developing countries^{17,18}, and none were undertaken in the Arab world. Investigators found a high prevalence (10–53%) of psychological distress among women attending gynecology clinics^{13–24}. However, the estimated incidence of psychological distress in developing and developed countries differed in studies using the same instruments. The pattern of the relationship between distress and gynecological morbidity may also differ between developed and developing countries.

Lebanon is an Arab country on the eastern shore of the Mediterranean Sea, and has a population of 3 million people. Lebanese culture is a mixture of traditional Arabic and recent influences (mainly from France and the USA). The health system is dominated by a profit-oriented private sector. Although 40% of the population of Lebanon have some type of health insurance, outpatient visits are not covered. The purpose of the present study was to assess psychological distress among gynecology patients in Lebanon and to examine the relationship between psychological distress and specific patterns of gynecological morbidity. Understanding the mental health needs of women attending gynecology clinics in Lebanon is an important step towards developing effective health services and intervention strategies. By making these data available to clinicians who are treating women in Lebanon and other Arab countries, we hope to increase interest in and sensitivity to the psychological components of help-seeking among women in gynecological settings. To our knowledge, this study is the first investigation of the relationship between psychological distress and gynecologic complaints in the Arab world.

METHODS

Sampling frame

The sampling frame for the study consisted of female patients seeking gynecological care from gynecologists affiliated with two general teaching hospitals in Beirut in 1997. The two categories of patients selected were patients attending outpatient departments for gynecological services and patients attending private gynecology clinics. At each of the clinics, consecutive patients aged 18 to 49 years attending for gynecological services were interviewed over a period of 2 months. Women who were attending for prenatal care or because of obstetrical problems were excluded. The study protocol was approved by the Committee on Human Research at the Johns Hopkins University School of Hygiene and Public Health and by the American University of Beirut Institutional Review Board.

Instruments

Data were collected by means of face-to-face interviews using two structured instruments, namely the 28-item General Health Questionnaire²⁵ (GHQ) and an instrument designed specifically for the project by the first author.

Psychological distress

Psychological distress was assessed using the 28-item version of the 60-item GHQ developed by Goldberg²⁵ to study psychological distress in primary care and community settings. The 28-item GHQ provides four scores, which measure somatic symptoms, anxiety and insomnia, social dysfunction and severe depression, respectively. Examples of items include 'been feeling unhappy and depressed', 'lost much sleep over worry', 'been having hot and cold spells', 'thinking of yourself as worthless' and 'scared and panicky'. The GHQ-28 is a brief screen for current psychological distress (3–4 minutes) and is strongly correlated with current, stressful life events and psychiatric treatment. The instrument has been translated into Arabic and has been used in research in Arabic-speaking countries²⁶ and in primary care settings from developing countries²⁷. The 28-item GHQ questionnaire was scored as recommended by Goldberg²⁵, with a threshold of > 4 identifying a 'case' of psychological distress.

Reason for index visit

Each woman was asked about the main reason for her current visit – that is, whether the visit was for a check-up, related to specific complaints, was a follow-up after surgery, or was a visit for some other reason.

Gynecological complaints

Each woman was provided with a list of common complaints to facilitate identification of the reason for her visit. The list was based on the most common complaints found in a gynecological morbidity survey conducted in Beirut²⁸, and consisted of the following: bleeding; menstrual problems; vaginal discharge; groin pain; itching and irritation; burning sensation during urination; back pain; breast pain or congestion; infertility. Each complaint was considered as a separate dichotomous variable (coded 1 if present and 0 if absent).

Medical illness

A checklist of 23 chronic conditions was used to collect data on medical comorbidity. The list of conditions consisted of common medical conditions seen in outpatient settings, including hypertension, diabetes, asthma, thyroid disease, kidney disease, anemia, cancer, cataracts and back pain. The summary score consisted of the number of conditions that were reported. For analyses, we dichotomized medical illness (coded 1 if at least one chronic medical condition was present, and 0 if no such condition was present).

Social support

Social support was assessed by means of questions about the availability of and satisfaction with personal assistance in dealing with emotional problems, financial problems, health problems, housework, and social and recreational issues. A score of 1 was given for each domain if the woman reported having personal assistance with that domain, and 0 if such a resource was not available. The five domains were summed to form a total score ranging from 0 to 5. This scale was previously used by Farhood *et al.*²⁹.

Life events

Stressful life events are those events that are associated with natural occurrences such as birth, pregnancy, marriage or death in the family. A total of 26 life events experienced in the recent past by the family were assessed as described by Farhood²⁹. The impact of life events was recorded on a 3-point impact scale where 0 = event not occurring or having no impact, 1 = mild or moderate impact and 2 = severe impact. A summary score was obtained by adding the impact element for each individual in the study across the 26 events.

Other covariates

Each respondent was asked a series of questions covering place of residence, age, education, marital status, number of children and employment status. They were also asked about the availability of a regular source of healthcare.

Analytic strategy

Bivariate associations between distress and gynecological morbidity, and other important variables were assessed. Potential multi-collinearities of independent variables were then examined by looking at pair-wise associations. Multiple logistic regression analysis with forward selection was used to estimate the probability of experiencing psychological distress after adjusting for covariates identified in the bivariate analyses. The variables included in the model were gynecological complaints with higher than 15% frequency of reporting which were significantly associated with psychological distress at the bivariate level, in addition to other covariates that were significantly correlated with psychological distress. Interaction terms were then added to the model and checked if they displayed any statistically significant effect. The Bonferroni correction method was used to control the overall error rate by dividing the latter by the total number of tests performed. Thus the observed significance level was adjusted for multiple comparisons. The data analyses were performed using SPSS version 7.5.

RESULTS

Study sample

Of the 360 female patients who were approached, and eligible for interview, 322 patients completed the interviews (90% participation rate), 33 patients had an incomplete interview (9%) and 5 patients declined participation in the study. Comparison of women who completed the interview with those who had an incomplete interview revealed no significant differences in demographic data apart from marital status. A higher proportion of women who had incomplete interviews were unmarried compared with those who had complete interviews ($\chi^2 = 4.916$, $p = 0.027$). The two groups also differed with regard to the presence of chronic illness. Women who had incomplete interviews were more likely than others to report at least one chronic condition (81.8% vs. 57.1 $\chi^2 = 7.559$, $p = 0.006$). In total, 355 female respondents considered for the study were seen by gynecologists in two hospitals. Of these women, 208 patients were visiting private clinics and a further 147 patients were seen by gynecologists in outpatient departments. Of the 355 patients who participated in this study, 308 women completed the GHQ.

Comparison of the two groups of patients from private clinics and outpatient departments revealed that the women who presented to outpatient departments were significantly more likely than the private patients to have a lower level of education ($\chi^2 = 135.17, p < 0.001$), to be in the age group 18–24 or 44–50 years ($\chi^2 = 9.38, p = 0.025$), to have a larger number of children ($\chi^2 = 10.13, p = 0.017$), and to have visited the doctor for a check-up or other preventive services ($\chi^2 = 15.76, p < 0.001$). There was no significant difference between the two groups with regard to marital status.

Baseline characteristics

Table 1 shows the profile of the study sample. In total, 48% of the women were from Beirut. The age range of the participants was 18–50 years, with a mean age of 34.45 years. Approximately one-third of the women had received a university education, a further 22.3% had received secondary education, and 47.3% had received less than a secondary education. A total of 144 women (40.6%) reported having no chronic medical condition. The rest reported at least one such condition, but the majority reported only one condition. The most frequently cited condition was migraine, followed by anemia, psychological problems, ulcer and hypertension. More than two-thirds of the women (83.4%) were married. The majority of the respondents (68.9%) were seeking care mainly for gynecological complaints. A total of 61 women (17.4%) were attending the clinic for a general check-up. The rest of the sample was attending the clinic for other preventive services such as intrauterine device (IUD) insertion (8.8%), for a consultation about contraceptive use, to obtain a prescription, or to make a follow-up visit after surgery (3.7%).

Psychological distress

The internal reliability of the 28-item GHQ was assessed using the study data. The resultant Cronbach's α value was 0.91. The bivariate analyses of psychological distress and other covariates in the study are shown in Table 2. Women who visited the gynecologists for specific complaints, for follow-up after surgery, for insertion of an IUD or for other services were more likely to be psychologically distressed than women who were attending for a general check-up ($\chi^2 = 9.466, p = 0.024$). Table 2 also shows the complaints in rank order of proportion of high scorers. The highest proportion of high scorers for psychological distress was among women who presented with abdominal pain, followed by those who complained of breast pain. Around 50% of women who reported abdominal pain or breast pain were psychologically distressed. The only two gynecological complaints that were not significantly associated with psychological distress were bleeding and infertility. The presence of any of the other complaints was statistically significantly associated with an increased likelihood of experiencing psychological distress. The proportion of psychological distress among women who reported specific complaints ranged from 26.3% to 48.9%.

With regard to the predisposing factors, there was no significant variation in psychological distress with age and level of education. However, stressful life events, a regular source of care, and social support were all significantly associated with psychological distress. A higher level of psychological distress was found among women with high scores for life events compared with women with low scores (31.1% vs. 17.2%; $\chi^2 = 7.967, p = 0.005$). Among those women with no regular source of care, 45.9% were psychologically distressed, compared with 15.8% of those who had a regular source of care ($\chi^2 = 30.747, p < 0.001$). With regard to social support, women who were psychologically distressed had a lower total score for support than women who were not psychologically distressed, and the difference in mean scores was significant ($F = 29.877, p < 0.001$). Single women were not more likely to be psychologically distressed than married, divorced or widowed women. Taking into account only married women, the association between psychological distress and number of children was of borderline significance ($p = 0.071$), with women who had three or more children being

less likely to experience psychological distress than women who had fewer children. Insurance, income, employment and clinic location were not found to be significantly correlated with psychological distress.

The results of the multivariable models are shown in Table 3. All potentially influential covariates were included in multivariable models if they were statistically significant ($p < 0.05$) in univariate analyses. Women without a regular source of care were more likely to experience psychological distress as measured by the GHQ than were those with a regular source of care (adjusted odds ratio (OR) = 7.56, 95% confidence interval (CI) = 3.37, 15.57). With regard to gynecological complaints, women with menstrual problems were more likely to experience psychological distress as measured by the GHQ than were those without menstrual problems (adjusted OR = 3.37, 95% CI = 1.68, 6.77). In addition, women who reported groin pain were nearly three times more likely than women who did not report such pain to experience psychological distress (OR = 2.97, 95% CI = 1.41, 6.24). A goodness-of-fit diagnostic and plots of the deviance residuals vs. fitted values predicted by each of the models showed that the coefficient estimates were not appreciably influenced by any one observation. We also considered several potential interaction terms. However, none of the latter reached the level of significance ($p = 0.05$).

DISCUSSION

One in four women who were attending gynecology clinics in two major hospitals in Beirut, Lebanon, reported significant psychological distress as assessed by means of a standardized questionnaire. Our finding was consistent with the average rates reported in the World Health Organization study on mental illness in primary care settings from 15 centers around the world²⁷. However, the proportion of distressed women was lower than that reported from other studies conducted in gynecology clinics using the GHQ^{17–20,23}, but similar to the rates reported from developing countries such as India and Nigeria^{17,18}. In all countries, the high frequency of psychological distress among gynecology patients would appear to merit attention and further study^{13–24}.

Before we discuss our findings and place them within the context of other studies, the potential limitations of this study deserve comment. Because the study was cross-sectional, we were unable to delineate fully the temporal relationships between psychological distress and gynecological complaints. Although our samples were not randomly selected from gynecology clinics in Beirut, the study sample was similar with regard to age, marital status and number of children to a sample of women selected from 27 clinics in Beirut for a study on reproductive health²⁸. Our sample had a higher, proportion of illiterate and unemployed women, as might be expected in view of the fact that the participating clinics serve sections of Beirut that have low socioeconomic status. We were unable to determine whether any of the women whom we surveyed would have fulfilled standard criteria for major depression or for any other psychiatric disorder. In addition, we could not ascertain whether physicians assessed patients for psychological distress, discussed ways of reducing such distress with these women, or treated depression. We may have found reduced levels of psychological distress if the women were interviewed after doctor visits. These are all considerations for future research on the health services in Lebanon.

Limitations notwithstanding, our study showed that a significantly higher proportion of women with a specific gynecological complaint report psychological distress compared with women who attend for a regular check-up. Considering each gynecological symptom separately, the highest proportion of women experiencing psychological distress was among those complaining of abdominal pain (48.9%), and the lowest proportion was among those with infertility (26.3%). The results of our study confirm that depressive symptoms are common in

gynecological practice, and together with the findings of other studies they highlight the importance of gynecology settings in the detection of psychological distress.

Table 4 summarizes the findings of published studies and lists the salient features in terms of population surveyed, instruments used for assessment, the prevalence of psychological distress, and factors associated with psychiatric morbidity. The table lists studies from the USA, UK, Belgium, Australia and Austria, as well as from India and Nigeria, and also includes our study based in Lebanon. Many of the investigations employed the GHQ as a measure of psychological distress, as we have done here²⁵. As assessed by the GHQ, rates of psychological distress ranged from 33% to 53% among different samples derived from gynecology outpatient clinics^{17–20,23}. Investigators from the UK and Australia reported a somewhat higher frequency of psychological distress (46–53% of women)^{19,20,23}. In contrast, studies in India and Nigeria found rates of 33% and 35%, respectively^{17,18}. Our study found that 24% of women attending gynecology clinics in Lebanon were experiencing psychological distress. Our literature review revealed that women attending gynecology clinics in developing countries reported slightly lower rates of psychological distress than the rates reported by women in developed countries, but a large number of women were affected in all of these countries.

Table 4 clearly shows that a variety of factors appear to be related to psychiatric morbidity among women attending gynecology clinics. In the UK, hysterectomy and complaints about abnormal menstrual bleeding²³ and pelvic pain¹⁹ were found to be more frequent among women who experienced psychological distress. In Australian gynecological patients, the women with psychological distress also had more complaints about menstrual problems²⁰. In Nigeria, psychological distress was most commonly associated with infertility¹⁸. In India, an increased prevalence of psychological distress was reported in patients with uterine prolapse and pelvic infections who were selected equally from inpatient and outpatient gynecological clinics¹⁷. Complaints that were found to be significantly associated with psychological distress in our study sample (e.g. abdominal pain, menstrual irregularity) have therefore been reported in other studies from both developing and developed countries^{17–20,23}. Our study demonstrated the remarkable similarity of the specific gynecological complaints associated with psychological distress among women from different countries.

In conclusion, our findings further highlight the importance of considering the psychological component of gynecological morbidity. Since women attending gynecology clinics show high levels of psychological distress, the mental health needs of these women may also be substantial. In Lebanon as well as in other countries, gynecologists should be trained both to recognize mental disorders in the outpatient setting, and to assess when treatment and referral are necessary. This will help to ensure a high quality of healthcare in gynecology settings.

Current knowledge on this subject

- No previous research has investigated a possible association between psychological distress and gynecological symptoms in the Arab world
- On average 50% of women attending gynecology outpatient clinics are estimated to be distressed
- The estimated rates of psychological distress in developing and developed countries were different in studies using the same instruments

What this study adds

- A high proportion of women who attend gynecology clinics with specific complaints report psychological distress

- The specific gynecological complaints associated with psychological distress are remarkably similar among women from different countries
- It is important for gynecologists to consider the psychological component of gynecological morbidity

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Table 1

Sample Characteristics.

Characteristics	Number	Percentage
<i>Place of interview</i>		
Outpatient department	147	41.1
Private clinics	208	58.6
<i>Place of residence</i>		
Beirut	169	47.6
Outside Beirut	186	52.4
<i>Age (years)</i>		
18–24	54	15.2
25–34	115	32.4
35–44	139	39.2
45–49	47	13.2
<i>Education</i>		
None or elementary	72	20.3
Intermediate	96	27.0
Secondary	79	22.3
University	108	30.4
<i>Marital status</i>		
Married	296	83.4
Single	36	10.1
Divorced/separated or widowed	23	6.5
<i>Number of children*</i>		
None	69	22.3
1–2	104	33.7
≥3	135	44.0
<i>Employment status*</i>		
Unemployed	262	74.0
Employed	92	26.0
<i>Chronic medical conditions</i>		
None	211	40.6
One or more	144	59.4
<i>Reason for visit*</i>		
Gynecological complaint(s)	242	68.9
Check-up	61	17.4
Follow-up after surgery	13	3.7
Other	28	8.8

* Totals do not add up to 355 due to missing or inapplicable information

Table 2

Sample characteristics according to presence of psychological distress as assessed by the General Health Questionnaire (score > 4): percentage values are shown

Characteristics	Psychological distress (n = 75)	No psychological distress (n = 233)	χ^2 F-test and p-value
<i>Age (years)</i>			
15–24	32.0	68.0	$p > 0.05$
25–34	27.1	72.9	
35–44	19.5	80.5	
45–49	23.1	76.5	
<i>Education</i>			
Illiterate/can read and write	29.0	71.0	$p > 0.05$
Intermediate	19.3	80.7	
Secondary	21.2	78.8	
University	27.8	72.2	
<i>Marital status</i>			
Single	37.5	62.5	$p > 0.05$
Married	23.4	76.6	
Divorced/separated or widowed	15.0	85.0	
<i>Number of children</i>			
None	29.6	70.4	$p = 0.071$
1–2	28.4	71.6	
> 3	16.7	83.3	
<i>Stressful life events</i>			
Low score	17.2	82.8	$p = 0.005$
High score	31.1	68.9	
<i>Social support</i>			
Mean score	4.24±0.59		$p < 0.001$
	4.79±1.13	NA	
<i>Reason for visit</i>			
Gynecological complaint(s)	26.9	73.1	$p = 0.024$
Check-up	7.7	92.3	
Follow up after surgery	33.3	66.7	
Other	29.2	70.8	
<i>Gynecological complaints</i> (only those who reported the complaint are included; n = number with specific complaint)			
Abdominal pain($n = 51$)	48.9	51.1	$p < 0.001$
Breast pain ($n = 29$)	44.4	55.6	$p = 0.035$
Irritation and itching ($n = 43$)	42.9	57.1	$p = 0.022$
Vaginal discharge ($n = 74$)	41.9	58.1	$p = 0.002$
Groin pain ($n = 77$)	38.5	61.5	$p = 0.017$
Menstrual irregularity ($n = 111$)	35.5	64.5	$p = 0.021$
Back pain ($n = 91$)	35.1	64.9	$p = 0.062$

Characteristics	Psychological distress (n = 75)	No psychological distress (n = 233)	χ^2 F-test and p-value
Burning sensation on urination (<i>n</i> = 51)	32.6	67.4	<i>p</i> = 0.022
Bleeding (<i>n</i> = 17)	28.6	71.4	<i>p</i> = 0.925
Infertility (<i>n</i> = 43)	26.3	73.7	<i>p</i> = 0.858

NA, Not available

Table 3

Relationship between personal characteristics and presence of psychological distress, adjusting for potentially influential covariates shown in the table and life events and social support scores (entered as continuous variables); 95% confidence intervals are shown in parentheses *

Personal characteristic	Odds ratio for presence of psychological distress
Does not have a regular source of medical care (reference group has a regular source of care)	7.56 [†] (3.67, 15.94)
Menstrual problems (reference group has no menstrual problems)	3.37 [†] (1.68, 6.77)
Groin pain (reference group has no groin pain)	2.97 [†] (1.41, 6.24)

* Variables not retained after forward selection were age, education, marital status, type of clinic, reason for visit, vaginal discharge, and abdominal pain

[†] $p < 0.01$

Table 4

Summary of studies that have estimated the prevalence of psychological distress in women attending gynecological clinics

Study	Design	Sample	Assessment instrument	Prevalence of psychological distress	Factor(s) associated with psychiatric morbidity
Sainsbury, 1960 ²¹ (UK)	C	n = 1513 aged 20–59 years, from two general hospitals	MPI	Gynecology patients tended to have high neuroticism scores;	N/A
Munro, 1969 ²² (UK)	C	n = 164, first attenders, mean age 37 years	Foulds Personal Illness Inventory	10%	Vague complaints Excessive menstrual or postmenopausal bleeding
Ballinger, 1977 ²³ (UK)	L	n = 272 aged 40–55 years	GHQ and standard psychiatric interview	53% (GHQ)	Hysterectomy
Byrne, 1984 ¹⁹ (UK)	C	n = 230 new referrals, aged 18–65 years	GHQ and PSE	46% (GHQ) 29% (PSE)	Marital status Age Pelvic pain Life events
Abiodun <i>et al.</i> , 1992 ¹⁸ (Nigeria)	C	n = 233	GHQ and PSE	35%	History of induced abortion Previous marriage Having no children Menstrual abnormalities Chronic pelvic pain Unsupportive husband
Chaturvedi <i>et al.</i> , 1994 ¹⁷ (India)	C	n = 100, 50 gynecological outpatients, and 50 inpatients	GHQ and PSE	33% GHQ 36% PSE	Uterine prolapse infections
Wancata <i>et al.</i> , 1996 ¹⁶ (Austria)	C	n = 728 inpatients (241 patients from a gynecological department)	CIS	21%	Single Low socioeconomic status Rural
Worsley <i>et al.</i> , 1997 ²⁰ (Australia)	C	n = 97	GHQ	50%	Role problems Menstrual problems Psychologically oriented illness
Miranda <i>et al.</i> , 1998 ¹⁴ (USA)	C	n = 205	PRIME-MD	48%	Physical abuse Sexual abuse
Buckens <i>et al.</i> , 1998 ¹³ (Belgium)	C	n = 2174	Goldberg Depression Scale	35% (≥ 2 symptoms) 19% (≥ 4 symptoms)	N/A
Alvidrez and Azocar, 1999 ²⁴ (USA)	C	n = 217	PRIME-MD	44%	Fewer than half of the women meeting criteria for depression identified themselves as depressed

Study	Design	Sample	Assessment instrument	Prevalence of psychological distress	Factor(s) associated with psychiatric morbidity
Spitzer <i>et al.</i> , 2000 ¹⁵ (USA)	C	<i>n</i> = 3000	PRIME-MD	20%	Functional impairment Disability days Healthcare use Psychosocial stressors
Chaaya <i>et al.</i> , 2003 (this study) (Lebanon)	C	<i>n</i> = 308	GHQ	24%	Menstrual problems Groin pain Regular source of medical care Stressful life events Social support

C, cross-sectional; CIS, Clinical Interview Schedule; GHQ, General Health Questionnaire; L, longitudinal; N/A, not applicable; MPI, Maudsley Personality Inventory; PSE, Present State Examination; PRIME-MD, primary care evaluation of mental disorders