Psychiatric morbidity and its sociodemographic correlates among women in Irbid, Jordan

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المراضة النفسية وترابُطاتها الاجتماعية والديموغرافية بين النساء في إربد بالأردن

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الخلاصـة: تم تقدير معدل المراضة النفسية وترابُطاتها الاجتماعية والديموغرافية لـدى 2000 سـيدة، يـراجعن ثلاثـة مراكز للرعاية الأولية في إربد، بالأردن. وقـد قامـت السـيدات باستكمال أدوات تشخيـصية معياريـة أمكـن مـن خلالها التعرُّف على تشخيص الأمراض النفسية لديهن، وعلى تفاصيل اجتماعيـة وديموغرافيـة، فضلاً عـن مِحْـراز score الكرب لديهن، حيث بلغ معدل المراضة النفسية 26.3٪، والضائقة السيكولوجية 39.0٪. وقد تبيَّن وجود ارتباط كبير بين مقدار الكرب وشدَّته وبين المراضة النفسية. وقـد ثبـت أن الوضـع العـائلي بعـد انفـصام الـزواج (بسبب الانفصال، أو الطلاق، أو الترمل)، وأمية المرأة، والعنف الأسري، والعلاقات الزوجية العنيفـة، والوحـدة، والزواج من غيرِ ذوي القربى، وكون المرأة زوجـة ثانيـة، وتـدنِّي مـستوى المساكن، وعـدم وجـود نظـام للـدعم الاجتماعي، شكَّلت عوامل مهمة تتـرابط مع حدوث المراضة النفسية لدى هذه المجموعة من النساء.

ABSTRACT The rate of psychiatric morbidity and its sociodemographic correlates was estimated in 2000 women attending 3 primary care centres in Irbid, Jordan. Women completed standardized diagnostic tools that yielded psychiatric diagnoses, a stress scale and sociodemographic details. The rate of psychiatric morbidity was 26.3% and psychological distress 39.0%. A significant association was found between the amount and severity of stress and psychiatric morbidity. Post-marital status (separated, divorced, widowed), woman's illiteracy, family violence, violent marital relationship, living independently, being in a non-cousin marriage, being a second wife, poor housing and absence of a social support system were significantly associated with psychiatric morbidity in this group of women.

La morbidité psychiatrique et ses corrélats sociodémographiques chez les femmes à Irbid (Jordanie)

RÉSUMÉ On a estimé le taux de morbidité psychiatrique et ses corrélats sociodémographiques chez 2000 femmes consultant dans 3 centres de soins de santé primaires à Irbid (Jordanie). Pour ce faire, l'étude a utilisé des instruments diagnostiques normalisés qui ont permis d'établir les diagnostics psychiatriques, une échelle du stress et des données sociodémographiques. Le taux de morbidité psychiatrique était de 26,3 % et la détresse psychologique s'élevait à 39,0 %. On a trouvé une association significative entre la quantité et la sévérité du stress et la morbidité psychiatrique. La situation post-matrimoniale (séparée, divorcée, veuve), l'analphabétisme de la femme, la violence familiale, des relations de couple violentes, l'indépendance de vie, l'union sans lien de cousinage, le statut de deuxième femme, les mauvaises conditions de logement et l'absence de système de soutien social étaient significativement associés à la morbidité psychiatrique dans ce groupe de femmes.

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Introduction

It is gradually becoming recognized that mental disorders are a public health problem throughout the world [1]. In order to institute policies and strategies to control mental disorders, their prevalence must be determined [2]. Psychiatric epidemiological studies are, therefore, crucial for the planning and development of psychiatric services. Such studies are also helpful in examining the sociodemographic correlates of mental disorders.

It has been reported that women are at higher risk for the development of mental disorders, especially for depressive and anxiety disorders [3–5]. It has been argued that women's multiple roles in society and heavier burden of social and household responsibilities puts them at higher risk for developing common mental disorders such as anxiety and depression [6,7]. Patel et al. identified a particular effect of rising income inequality on women's risk of common mental disorders [8]. More so, in many traditional societies women bear additional burden in the form of gender discrimination and gender violence [7]. Abused women are more likely to suffer from anxiety and depression than non-abused women [9]. Indirect evidence points to the presence of pronounced gender inequality in the Eastern Mediterranean Region, where there are mainly Islamic traditional societies [10]. Psychiatric morbidity among Arab women has not been extensively investigated [11]. This is unfortunate, since identifying the correlates of psychiatric morbidity in a society enables women and members of their communities to improve their control over their mental health.

The main aim of this World Health Organization collaborative study, therefore, was to estimate the prevalence of mental disorders and their sociodemographic correlates among women attending primary care centres in one city in Jordan.

Methods

Subjects

The study was undertaken from March 2002 to April 2002. The participants were women aged 18 years and over visiting 3 health centres in Irbid, Jordan. The health centre at Jordan University of Science and Technology (JUST) provides medical services for students of JUST and Yarmouk University as well as for the employees of the 2 universities and their dependents. The other 2 health centres belong to the Ministry of Health and provide health services for citizens of the city of Irbid and its suburbs. Nine primary care physicians were selected to take part in this study. They were familiarized with the objectives and instruments of the study.

A convenience sample of 2000 women was selected. The first 20 patients attending the morning and afternoon sessions were approached. Women who were not attending for a consultation were excluded. If a woman refused to participate the next was chosen. Informed consent was obtained from all participants.

The protocol was approved by the World Health Organization (WHO) regional office in Jordan and by the research and ethical committee of the Faculty of Medicine of JUST.

Instruments

Patient Health Questionnaire

The Patient Health Questionnaire (PHQ) was the first mental health diagnostic test that could be entirely self-administered by the patient and is 85% effective in suggesting the presence of a mental health problem [12]. The physician applies algorithms to

make the final diagnosis and the PHQ simplifies the differential diagnosis by assessing only 8 disorders. These are divided into "threshold disorders" corresponding to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) diagnoses (e.g. major depression, panic disorders, other anxiety and bulimia nervosa) and "subthreshold disorders" (e.g. other depressive disorders, probable alcohol abuse, and somatoform and binge-eating disorders). If a patient scores positive for any problems they are asked: "How difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?" Before making a final diagnosis, the clinician or interviewer rules out physical causes of depression, anxiety and physical symptoms. As the prevalence of alcohol use is very rare or absent among the female population in Jordan, the section on alcohol use was replaced by a corresponding section on nicotine use.

Self-Reporting Questionnaire

The Self-Reporting Questionnaire (SRQ-20) was developed primarily as a screening tool to suit primary health care settings of developing countries [13]. The SRQ consists of 20 questions answered yes or no. It may be used either as a self-administered or interview-administered questionnaire. Various additional questions have been used with the SRQ-20 to screen for psychotic disorders and substance abuse. The validity of the SRQ-20 was examined by several groups of investigators using the same cut-off point (7/8), and validity of the SRQ compared to a level of 90% for sensitivity, and 80%–95% for specificity [14–16].

Perceptions of general health

A single-item scale was constructed for self-perception of general health on a 4-point scale ("excellent", "very good", "acceptable" and "poor").

Statistical analysis

Data were expressed as mean and standard deviation (SD) for continuous variables. The chi-squared test was used to elicit associations between dichotomous variables. Continuous variables were compared using t-tests and 1-way analysis of variance. Variables that were examined for their association with morbidity were: age (3 levels), marital status (3 levels), employment status (5 levels), age difference from husband for married women (3 levels), polygamy for married women (3 levels), blood relatedness with husband for married women (2 levels), living with husband's family for married women (2 levels), housing size (3 levels), major life events (2 levels), violent marital relationship (2 levels), educational status (3 levels) and evidence of drug- and alcohol-related problems in the household (2 levels each). Self-perception of general health was expressed in frequencies and percentages. The prevalence of psychiatric morbidity was calculated for the whole sample and specific rates were also estimated for subgroups of subjects as defined by the severity of stress. Subjects were categorized into 2 groups by severity of stress. Those who rated themselves as being exposed to stress all the time over the past 4 weeks were labelled as being exposed, the remainder were non-exposed along the 11 stress items on the PHQ.

SPPS, version 9.0 for Windows was used for statistical analysis.

Results

Demographic characteristics

A total of 2000 women participated in the project. Their ages ranged from 18 to 85 years with a mean of 32.1 years (SD = 9.1). Table 1 shows the sociodemographic characteristics of the studied sample: 78%

Table 1 **Prevalence of mental disorders of the sampled women by sociodemographic variables**

Variable	Total women[a] No.	Women with mental disorders	
		No.	%
Age (years)			
≤ 29 years	689	184	26.7
30–39 years	628	185	29.5
≥ 40 years	624	200	32.1
Marital status			
Single	382	133	34.8
Married	1549	418	27.0
Post-marital[b]	46	25	54.3
Polygamy			
First wife	453	34	7.5
Second wife	83	37	44.6
Third wife	8	2	25.0
Only wife	947	340	35.9
Educational level			
Illiterate	74	35	47.3
1–6 years	167	48	28.7
7–12 years	712	214	30.1
≥ 13 years	1036	287	27.7
Employment			
Unemployed	181	39	21.5
Employed (official)	399	134	33.6
Private business	29	9	31.0
Student (university)	294	101	34.4
Housewife	1084	301	27.8

[a]*Data missing in some categories.*
[b]*Includes separated, divorced or widowed.*

were married; 19% were single and the rest were separated, divorced or widowed (post-marital). Approximately 4% were illiterate, 8% had 1–6 years in formal education, 36% had 6–12 years in formal education, and 52% had 13+ years in formal education. Approximately 21% were employed, 69% were housewives or students, and 9% were unemployed.

For 35% of married subjects their husband was a blood relative and about 80% of married couples lived independently from the husband's family. Only 5% of married women had a similar age to their husband (i.e. up to 5 years different). There was an age difference of 10 years in nearly 52% of married couples and > 10 years in 8% of married couples. Approximately 6% of married women lived in polygamous marriages (91 out of 1491 responding to this question). Of them, 83 were a second wife (where the husband had 2 wives) and 8 were a third wife (where the husband had 3 wives). Nearly 52% of subjects lived in

houses of 3–4 rooms, 17% in houses of 4+ rooms, and 25% in houses of ≤ 2 rooms.

Of the married women, 45% described their marital relationship as excellent, 24% as normal, 20% as having some problems, 9% with intermittent quarrels and 3% as violent. Approximately 8% of the women reported a previous history of emotional and psychiatric disorders, but only 44% of them had sought help (8% were treated by general practitioners, 30% by psychiatrists, and 6% by faith healers).

Prevalence of mental disorders (distress)

The point prevalence of mental disorders as measured by the SRQ-20 (cut-off ≥ 7) was 36.0% and as measured by the PHQ was 29.3%. Table 2 shows the DSM-IV diagnoses of all subjects. The most common diagnoses among the studied sample were depressive disorders (9.8%), major depressive disorder (7.1%) and nicotine dependence/withdrawal (5.4%). Women living in single-room houses showed higher rates of mental disorder compared with women living in houses of 3+ rooms (34.3% versus 26.6%).

Self-perception of general health

Table 3 reveals that only 75.4% of subjects reported their general health as very good or excellent, 22.7% acceptable or poor.

Specific stressors (present all the time over past 4 weeks)

Table 4 shows the proportion of women exposed persistently to stressors and reveals that financial problems (18.1%), problems with husbands (11.9%), work-related problems (7.9%) and problems with weight and or shape (7.4%) were the commonest hardships that the women were exposed to during the study period. The prevalence of mental disorders among women exposed to different forms of stressors ranged from 53.8% to 74.0%.

Specific predictors of morbidity

Table 5 shows that violent marital relationships, post-marital status (separated, divorced, widowed), women's illiteracy, polygamy (being a second wife) and age difference from husband were significantly associated with psychiatric morbidity among this group of women.

Discussion

To the best of our knowledge this is the first report on women's mental health problems in Jordan. The report addresses metal health

Table 2 **Primary diagnosis of the sampled women by Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) categories**

Diagnosis	No.	%
Other depression	196	9.8
Major depressive disorder	141	7.1
Nicotine dependence/ withdrawal	107	5.4
Panic disorder	47	2.4
Other anxiety	32	1.6
Eating disorder	32	1.6
Somatoform disorder	31	1.6
No diagnoses	1414	70.7
Total	2000	100.0

Table 3 **Self-perception of general health of the sampled women**

Self-perception of health	No.	%
Excellent	456	22.8
Very good	1052	52.6
Poor or acceptable	453	22.7
Missing	39	2.0
Total	2000	100.0

Table 4 **Proportion of sampled women exposed to continuous stress over the past 4 weeks and the prevalence of mental disorders**

Specific stressors	Total women		Women with mental disorders	
	No.	%	No.	%
Problems with husband (married only)	208	11.9	154	74.0
Traumatic events (severe)	79	4.1	57	72.2
Extreme concern about health	120	6.1	85	70.8
Work-related problems	151	7.9	100	66.2
Absence of social support	114	5.9	75	65.8
Financial problems	353	18.1	232	65.7
Recent unpleasant events	111	5.7	72	64.9
Taking care of children or elderly parents	134	7.5	86	64.2
Sexual dysfunction	51	3.1	30	58.8
Shape/weight problems	145	7.4	78	53.8

problems, quality of life and the sociodemographic correlates of psychiatric morbidity among women attending health facilities and living in urban and rural areas in Jordan. The strengths of this study include its large sample size, the heterogeneity of the

Table 5 **Variables found to be significantly associated with psychiatric morbidity of the sampled women**

Predictor	Total women No.	Women with mental disorders		*P*-value
		No.	%	
Violent marital relationship	11	6	54.5	0.0001
Post-marital (separated, divorced, widowed)	45	25	55.6	0.0001
Age difference ≥ 10 years from husband	27	13	48.1	0.001
Illiteracy	74	35	47.3	0.0001
Being the second wife	83	37	44.6	0.0001
Physical violence	49	21	42.9	0.021
Recent unpleasant events	1032	401	38.9	0.001
Absence of social support	372	124	33.3	0.032
Non-cousin marriage	1027	304	29.6	0.022
Living independently	1264	376	29.7	0.022

sample in terms of age and education and the comprehensive set of measures.

One of the aims of this study was to explore the social origins of distress among women. The finding of a high rate of psychiatric morbidity and mental distress among our participants is consistent with the previous observations in this regard. The prevalence of women with potential psychiatric distress (36.0%) in our sample was lower than that reported by Maziak et al., who found that 55.6% of low-income women in Aleppo, Syria, were labelled as cases according to the SRQ-20 using the same cut-off point (7/8) [17]. However, Table 4 shows that the rate of mental disorders among women with poor financial status is nearly double the rate found in the sample as a whole. The rate is lower that that reported by Al-Subaie et al., who found that 76% of women attending a health facility in Saudi Arabia were mentally distressed using a more lenient cut-off point (6/7) on the SRQ-20 [18].

Comparison of empirical studies of mental disorders reveals a consistent picture across diverse societies and social contexts that depression and anxiety disorders are more prevalent among women. The disability-adjusted life years data recently tabulated by the World Health Organization reflect the size of the problem [19]. While the high rates of mental disorder in women is not a new finding [20], we have been able to substantiate this high prevalence in a primary care population, with documentation by a brief, validated diagnostic instrument that can detect the categories of mental disorders most prevalent in primary care. The high rate of mood disorders in women is particularly well known [21–23]. Biological and sociological causes have been postulated. Women are particularly likely to experience depression during certain vulnerable periods of their lives, and

specific life events (divorce) have special meaning for women and are correlated with depressive symptoms. Our study confirms previous observations that women have a high risk of common mental disorders [23,24].

The economic status of women in our study (as assessed by education status, size of house and financial difficulties) was found to be a significant correlate with psychiatric morbidity. This accords with previous reports that link psychiatric morbidity with low socioeconomic class [17,25,26]. Another predictor of psychiatric morbidity in our study was the woman's illiteracy. Data from developed countries show that educational qualifications are good predictors of women's health and that there is a link between low educational level and the risk of common mental disorders [27–29]. Lack of education represents a diminished opportunity for people to access resources to improve their situation [30]. The significant association between psychiatric morbidity and indices of poverty such as low education and financial difficulties seems to be a robust finding, and is a universal one, occurring in all societies irrespective of their levels of development [17,31–34]. Poor women have more stressful lives than other women in terms of a higher risk of severe life events [35,36] and violence [37,38] and the stresses of living in poor housing and dangerous neighbourhoods [39,40]. They face more problems with parenting and child care [40], personal relationships [41] and social networks [37].

Our findings with regard to the prevalence of mental disorders in polygamous marriages showed an interesting pattern. Overall, 42.9% of women in polygamous marriages suffered mental disorders compared with 26.7% of first and only wives. Further analysis suggested that polygamous marriage was a significant protective factor

against poor mental health for first wives, while it has a very deleterious effect on mental health for second wives. We have no clear explanation for such observations. We speculate that the psychiatric distress in women with strained marital relationships is somehow lessened by further marriages, but becomes deleterious for the new coming wives. Our results provide strong evidence for the deleterious effect of this practice on women consenting to be the second wife in already established marriages.

There is a wealth of evidence from around the world linking physical abuse to common mental disorders such as depression and anxiety [7]. Having violent marital relations and suffering physical violence were both significant predictors of mental disorders in our group of women. Recent studies have also shown that a prior history of abuse may be correlated with mental disorders later in life, which is consistent with our findings [42]. In this regard, the clinician evaluating the depressed woman needs to pay particular attention to these potential causative factors.

The sociodemographic correlates of psychiatric morbidity in our study are of interest because of their positive associations with psychiatric morbidity. The positive findings of higher psychiatric morbidity among post-marital (separated, widowed, divorced) than among single and married women might be explained in part by the loss of social support of the family system. This is in accordance with the findings from an Ethiopian survey [2]. Our results provide evidence that living in an extended family system and cousin marriages are protective factors against psychiatric morbidity. The role of the extended family system in providing support has been highlighted in studies conducted by WHO [43]. The availability of other family members may attenuate the burden of child care. It is in line with the findings from community psychiatric surveys from Mediterranean countries, where the burden of child care is lower [44,45]. The findings that women within cousin marriages have lower psychiatric morbidity than those of non-cousin marriages may in part be explained by the observation that living independently from the extended family system is more likely among non-cousin marriages. It seems that cousin marriages and remaining within the extended family system play a protective role against psychiatric morbidity.

The relationship of adversity and undesirable life events and psychiatric morbidity is well documented. Each of the 11 psychosocial stressors assessed with the PHQ was associated with a high rate of psychiatric morbidity. In this regard, our findings are in line with the results of Bebbington et al., who explored the relationship between adversity and psychiatric morbidity among women in Dubai [46]. Because our study design was cross-sectional, however, we cannot conclude that stressors were etiologically related to mental disorders. Indeed, it is possible that in some instances, the stressors were a consequence rather than a cause of mental disorders.

Conclusion

Our findings provide further support to previous reports of a high rate of psychiatric morbidity in women attending health facilities. The other interesting finding of this study is the positive association between psychiatric morbidity and potentially modifiable sociodemographic factors, such as low education, poverty, isolation, violence and lack of social network support system. It would be of interest to find out whether modifying such factors would indeed result in ameliorating psychiatric morbidity in women.

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