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Prevalence of and Factors associated with Anxiety and Depression among Women in a lower middle class semi-urban community of Karachi, Pakistan

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Abstract

Objective: To study the prevalence of, and factors associated with anxiety and depression among women.

Design: A cross sectional survey.

Setting: A lower middle class semi -urban community of Karachi, Pakistan. **Participants:** A total of 1218 women between the ages of 18-50 years.

Methodology: Systematically every third household was identified from which a woman was randomly selected. The Aga Khan University Anxiety and Depression Scale and a socio-demographic questionnaire were administered verbally by trained interviewers for assessing the prevalence of, and associated factors for anxiety and depression.

Results: A prevalence of 30% was found. Increasing age, lack of education and verbal abuse were the associated factors found to have an independent relationship.

Conclusion: Providing education and reducing domestic abuse could lead to decrease in the prevalence of anxiety and depression in women (JPMA 52:513;2002).

Introduction

World-wide 480 million people are estimated to be suffering from depression and a quarter of these have anxiety as well¹. Over ninety percent of mental health problems in the community are anxiety and depression and co-morbidity is common². Their combined prevalence is taken as a measure of the magnitude of mental illness in a community³ and the enormous universal burden . of depression has been reported in several studies. Two thirds of the affected are living in the developing countries, and this ratio is expected to rise due to the rapid population growth, urbanization and strong links between adverse socio-environmental factors and prevalence of mental illness⁴⁻¹².

Studies conducted in Pakistan have revealed a high prevalence of anxiety and depression on the whole with more than double the prevalence in women, and a higher prevalence in rural compared to urban areas¹³⁻¹⁶. Some of the psycho-social risk factors for depression identified among women living in Karachi are very early marriage, hostile in-laws and lack of an intimate and confiding relationship with the husband¹⁷.

Pakistan is a developing country with an estimated population of 140 million. About 70% of the population is rural based and dependent on agriculture for its livelihood. Persisting drought over the last few years has forced people to urban areas in search of employment¹⁸. Karachi is a mega-city with a population of more than 14 million of which 40% live in squatter settlements where over crowding; unemployment, poor civic amenities and rapidly changing social structure are common. Women are in double jeopardy because of their illiteracy, domestic violence and loss of extended family¹⁹. This survey was carried out to identify women who were anxious and depressed for a community based

interventional study being conducted in Qayoomabad one of the lower middle class semi-urban community of Karachi. This paper reports the baseline data collected before initiation of the main study.

Methodology

A cross-sectional survey was carried out in Qayoomabad which has a population of about 80,000, from January 8 - February 14, 2001, to identify women suffering from anxiety and depression. Systematically every third household was identified from which a woman meeting the inclusion criteria was randomly selected. The inclusion criteria were: informed consent, age 18-50 years, able to understand the local language Urdu, planning to live in Qayoomabad for at least one year, and not having suffered a bereavement in the last six weeks.

The Aga Khan University Anxiety and Depression Scale (AKUADS) was used as the assessment tool. It is an indigenously developed and validated screening instrument that has been used in several studies²⁰⁻²³.

AKUADS was administered verbally by trained interviewers. A questionnaire covering the socio-demographic characteristics and potential factors associated with anxiety and depression was also administered. Pretesting was carried out at a field site with socio-economic and cultural environment similar to the study area.

Data was entered using Epi-Info package following standard double entry procedure; 10% of the records were compared and the error rate detected was 0.03%. Data was analyzed using the statistical software package SPSS,

version 10. The descriptive analysis provides important information about the study population.

Univariate and multivariate logistic regression models were used to estimate the crude and adjusted odds ratios and their confidence intervals.

Results

Overall 1226 women were interviewed. Out of these women, 8 were excluded from the sample, as their age was less than 18 years. Finally a sample of 1218 women was analyzed of which 366 were identified to be anxious and depressed. This provides an estimate of 30% for the overall prevalence of anxiety and depression in this population. Mother tongue (language spoken at home) was used as a surrogate marker for ethnicity and immigration. Five ethnic groups were identified; Hazarawalas, Pathans, Punjabis, Urdu speaking and others (Gujrati/Sarieki). In the entire study population (1218 women), 430 were Hindko speaking, out of the later 140 (32.6%) were found to be cases. Similarly of the 155 Pushto speaking 58 (37.4%), of 421 Punjabi speaking 113 (26.8%), of 196 Urdu speaking 52 (26.5%), of 16 Gujrat/Sarieki speaking 3 (18.8%) were found to be cases.

Among the 366 anxious and depressed women identified, 140 (38.3%) were Hindko speaking, 113 (30.9%) spoke Punjabi, 58 (15.8%) were Pushto speaking, 52 (14.2%) were Urdu speaking and 3 (0.8%) spoke Gujrat/Sarieki (They have been grouped together as their number are too small to influence the results.

Majority of the residents (86.5%) had houses of concrete construction, 47% had three or more than three living rooms, almost all the households (98.4%) had Sui gas and electricity (99.4%). Households with a television were 75.3%, with a motorcycle or a car were 20.2% and with a telephone were 26%.

These possessions were used as proxy indicators for socioeconomic status as used in the National Health Survey of Pakistan²⁴. According to these criteria 4.5% belonged to the high socioeconomic class, 78.2% to the middle and 17.2% to the low socioeconomic class.

The baseline characteristics of the population are provided in Table 1.

Table 1 : Baseline Characteristics of Women in Qayoomabad-Karachi, 2001 (n=1218)

Characteristics	f	(%)
<i>Age group (years)</i>		
18-20	174	14.3
21-30	522	42.9
31-40	379	31.1
41-50	143	11.7
<i>Religious Affiliation</i>		
Muslims	1048	86.0
Christians	161	13.3
Hindus	9	0.7
<i>Main language spoken at home</i>		
Hindko	430	35.3
Punjabi	421	34.6
Urdu	196	16.1
Pushto	155	12.7
Others+	16	1.3
<i>Educational status</i>		
No formal education	503	41.3
Primary	223	18.3
Secondary	367	30.1
Higher secondary	87	7.2
Graduate & Post graduate	38	3.1
<i>Marital status</i>		
Single	168	13.8
Married	1008	82.8
Widowed & Divorced	42	3.4
<i>Generation of revenue</i>		
Yes	140	11.5
No	1078	88.5
<i>Type of household Income</i>		
Monthly Income	761	62.5
Daily Wages	305	25.0
Own Business	122	10
Others ++	30	2.5
<i>Duration of residence in area (years)</i>		
<1	91	7.5
1-5	249	20.4
5-10	229	18.8
10+	649	53.3
<i>Biggest worry in life at present</i>		
None	330	27.1
Financial problem	654	53.7
Physical illness	58	4.8
Domestic problems	149	12.2
Community problems	27	2.2

+ Gujrati / Sarieki.

++Not clearly specified by respondents

The mean age was 30.7 years with the standard deviation of 8.3. The majority of the women were migrants from other areas of Pakistan as only 16.6% considered Urdu as their first language. The mean number of children in the family was 4.7 with a standard deviation of 2.8. Contraception was practiced by 44.5% of women.

Factors associated with anxiety and depression in the univariate analysis are summarized in Tables 2 and 3 list the factors that remained significant in multivariate analysis.

Table 2: Univariate Analysis of factors Associated with Anxiety and Depression in Women in Qayoomabad-Karachi, 2001 (n=1218)

Variable	Anxious & Depressed n ₁ =366(%)	Not Anxious & Not Depressed n ₂ =852(%)	OR (95% CI)
Age group (years)			
18- 20	27 (7.4)	147 (17.3)	1
21-30	134 (36.6)	388 (45.5)	1.9 (1.2, 2.9)
31-40	145 (39.6)	234 (27.5)	3.4 (2.1, 5.3)
41-50	60 (16.4)	83 (9.7)	3.9 (2.3, 6.7)
Educational status			
Formal education	180 (49.2)	535 (62.8)	1
No formal education	186 (50.8)	317 (37.2)	1.7 (1.4, 2.2)
Total household income per month*			
>3000	166 (47.7)	426 (50.7)	1
≤3000	182 (52.3)	414 (49.3)	1.3 (0.9, 1.4)
Type of household Income*			
Monthly Income	208 (59.8)	553 (65.8)	1
Own Business	105 (30.2)	87 (10.4)	1.1 (0.7, 1.6)
Daily Wages	35 (10.0)	200 (23.8)	1.4 (1.1, 1.9)
Marital status			
Single	26 (7.1)	142 (16.7)	1
Married	320 (87.4)	688 (80.7)	2.5 (1.6, 3.9)
Widowed & divorced	20 (5.5)	22 (2.6)	4.9 (2.4, 10.4)
Parity**			
≤2 children	56 (15.3)	193 (22.7)	1
>2 children	284 (77.7)	517 (60.7)	1.9 (1.4, 2.6)
Permission to leave home alone			
Not always	71 (19.4)	155 (18.2)	1
Always	235 (64.2)	468 (54.9)	1.1 (0.8, 1.5)
Not at all	60 (16.4)	229 (26.9)	0.6 (0.4, 0.9)
Responsibility to make household decisions			
Combined	174 (47.5)	429 (50.4)	1
Self	33 (9.0)	30 (3.5)	1 (0.8, 1.3)
Husband	159 (43.3)	393 (46.1)	2.7 (1.6, 4.6)
Verbal abuse by any family member			
No	278 (76.0)	776 (91.1)	1
Yes	88 (24.0)	76 (8.9)	3.2 (2.3, 4.5)
Physical Abuse by any family member			
No	332 (90.7)	830 (97.4)	1
Yes	34 (9.3)	22 (2.6)	3.9 (2.2, 6.7)

*Information is missing for 30 subjects ** Information taken only from ever-married women

Table 3. Multivariate analysis of factors associated with Anxiety and Depression in women in Qayoomabad, Karachi, 2001 (n=1218).

Variables	Adjusted OR	95% CI
Age group (years)		
18-20	1	-
21-30	1.83	0.88 - 3.81
31-40	2.80	1.35 - 5.83
41-50	3.48	1.59 - 7.60
Educational status		
Literate	1	-
Illiterate	1.45	1.09 - 1.92
Abusive language in the house		
No	1	-
Yes	3.54	2.42 - 5.18

Discussion

The prevalence of anxiety and depression is universal, but varies in different countries, environments, between sexes and different ages. A community based study of prevalence in women done in urban Zimbabwe²⁵ reported a figure of 30.8% and another in urban Mumbai 25-28%²⁶. A prevalence of 25% in women of urban Rawalpindi¹⁶ has been shown, these figures are close to our finding of 30%.

Prevalence of 46% among women in Chitral¹³ and 66% in rural Punjab¹⁴ has been reported, which is much higher than in urban women, suggesting the possibility that the associated factors for depression are more prevalent in rural women.

A cross-sectional study conducted in 1996¹⁵ in a similar community in Karachi had reported a prevalence of depression in 42% women, but the subjects were not recruited randomly and according to authors a self-selection bias was possible. A prevalence of only 17.6% is reported from Bangalore²⁶, which is known for its high literacy rate and education and has been found to confer protection in many studies^{13,16,27} including ours ($p < 0.001$).

Education improves coping mechanisms in more than one-way; it raises the self-efficacy and therefore the self-esteem of women. It also makes women feel less helpless in difficult situations and gives a greater sense of control over their environment²⁸.

The lowest prevalence was found in the local population (Urdu as mother tongue) lending credence to immigration being an associated factor for depression¹⁰.

Prevalence of depression rises with age^{15,16,29} which is similar to our finding, of a 5% increase in the odds of becoming anxious and depressed for every one year increase in age. Marital status and parity have been identified as associated factors consistently in studies carried out in Pakistan^{13,27} and this is supported by our study as well.

The retention of verbal abuse and the elimination of physical abuse in the multivariate model is noteworthy as it indicates that emotional trauma is worse than physical³⁰. Financial difficulty was found significant in the univariate analysis but it did not come out as an independent factor in our multivariate model indicating that depression is not just an inventory of poverty.

Compared to women who could go out unescorted, the women who always had to be escorted were less likely to be anxious and depressed. This finding probably indicates that culturally women who are escorted feel more secure and cared for. As Qayoomabad is predominantly a lower middle class semi-urban community in Karachi, the results can be generalized to similar settings. To avoid interpreter bias only women who could understand Urdu were included which could be responsible for a bias in interpreting prevalence in different ethnic groups.

Educating women, enabling them to generate revenue and reducing verbal abuse could lead to decrease in the prevalence of anxiety and depression.

Currently a study is underway to assess the effect of counselling by briefly trained community counsellors on levels of anxiety and depression in women identified in this survey. The results will be reported in a subsequent paper.

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