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# Center-Based Prevalence of Anxiety and Depression in Women of the Northern Areas of Pakistan

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## Abstract

**Objective:** To estimate the prevalence of anxiety and depression in women of the Northern areas.

**Methods:** A cross-sectional center-based study was conducted at Singal Medical Center (SNIC), Gilgit, in the Northern Areas of Pakistan, using the Hospital Anxiety and Depression Scale (HADS).

**Results:** One hundred and twenty women, between the ages of 16 and 60, attended the SMC over a two month period and were included in the study. Using HADS, it was found that 50% of the women had anxiety and/or depression; 25% suffered only from anxiety, 8% from depression and 17% had features of both.

**Conclusion:** This study supports the previous studies of stress in remote areas and also contradicts the belief that people who live in the remote rural areas lead stress-free lives or have low rates of psychiatric morbidity (JPMA 50:138, 2000).

## Introduction

Depression is one of the most common problems in the world. It is twice as frequent in women than in men and is on the increase<sup>1</sup>. There is a persistent belief in the Western world that people who live in the remote areas of the globe, beyond the reach of stressful modern societies, lead comparatively stress-free lives<sup>2</sup>.

In the Northern Areas of Pakistan, people are struggling with the combined effects of poverty, physical disease and social isolation as many of their men-folk are employed away from home. It may be because of these special circumstances, that people living in the remote areas of Pakistan were considered to be at a greater risk for developing anxiety and depressive disorders than those in urban societies. Therefore, this study was conducted to estimate the prevalence of anxiety and depression among rural women attending a local health facility in the Northern Areas of Pakistan and to identify social stresses which may correlate positively with the prevalence of these two psychiatric disorders (anxiety and depression).

The Single Medical Center (SMC) is located in the Ghizer district of the Punial Valley in the Northern Areas of Pakistan. It serves a population of over 10,000 and is 50 km from Gilgit, which is the capital of the Northern Areas. The majority of the people are Muslims, of whom 70-80% belong to the Ismaili sect and are the followers of the religious leader, His Highness Prince Aga Khan IV. The literacy rate is over 40%, unusually high for Pakistan because of the educated and well-knit Ismaili Community.

It is the only primary-cum-secondary care medical facility that serves the Punial Valley population. SMC employs young women from the surrounding villages, who are trained as lady health visitors (LHVs). The LHVs are very motivated, extremely competent and have a deep understanding of the problems faced by the women of their communities.

It had been the subjective assessment of the center personnel that a large number of adult female patients suffered from anxiety and depression and that somatization disorders were also common in the female population.

## Patients and Methods

A facility-based cross-sectional study was designed to estimate the prevalence of anxiety and depression in women living in the Punial valley, presenting to SMC with perceived medical problems.

All females between the ages of 16-60 years attending the center over a two-month period (April 1 - May 3, 1991). were included in the study. They comprised all kinds of patients who presented at the Center during the day time clinics and also who came at night. At night, interviews were done by the trained LHV's as they were living inside the center premises. Formal consent was taken from all patients.

Two types of questionnaires were used.

**1. Questionnaire I**

This included several questions concerning the demographics of the women and information regarding the risk factors which are known to contribute to anxiety and/or depression.

**2. Hospital Anxiety and Depression Scale (HADS)**

The previously validated<sup>3</sup> Urdu translation of HADS was used. HADS is a fourteen-item scale with two subscales, one for anxiety and one for depression, with seven items in each subscale<sup>4</sup>. Scores of 10 or more indicate definite cases. The depression subscale has 1% false-positive and 1% false-negative rates, whereas the anxiety subscale has 5% false-positive and 1% false-negative rates<sup>4</sup>. HADS is based solely on psychiatric symptoms and yields results which show that physically ill patients (or patients with organic illnesses) who do not have mood disorders, have scores similar to those of the normal population.

Two LHVs were intensively trained in the verbal administration of the demographic questionnaire as well as the Urdu translation of HADS to maximize the intra-rater and inter-rater reliability.

The data was analyzed in the Department of Community Health Sciences at the Aga Khan University, Karachi. Correlation of social risk factors to the presence of psychiatric disorders was estimated by the test of significance (p value).

**Results**

The demographic characteristics of our study population are shown in Figure 2.

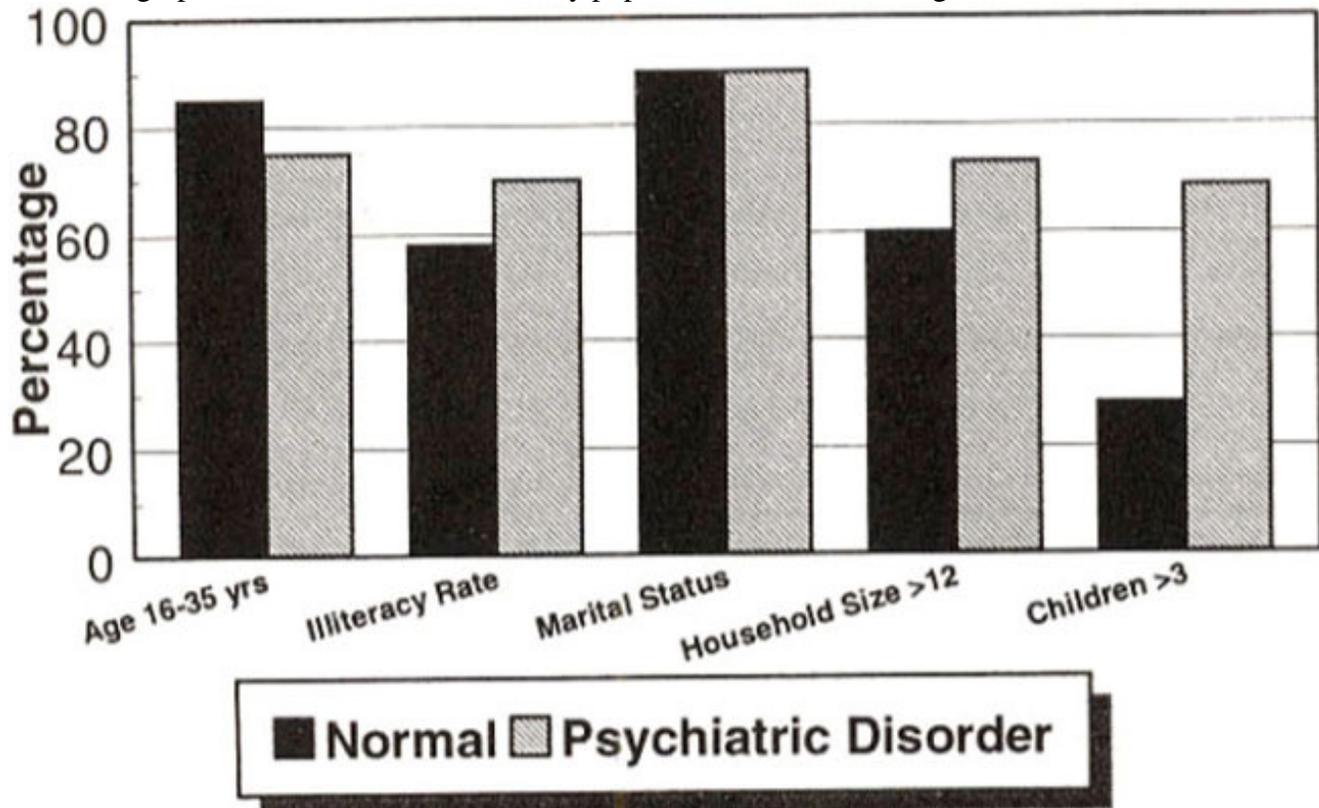


Figure 2. Demographic Data of Patients with Psychiatric Disorders.

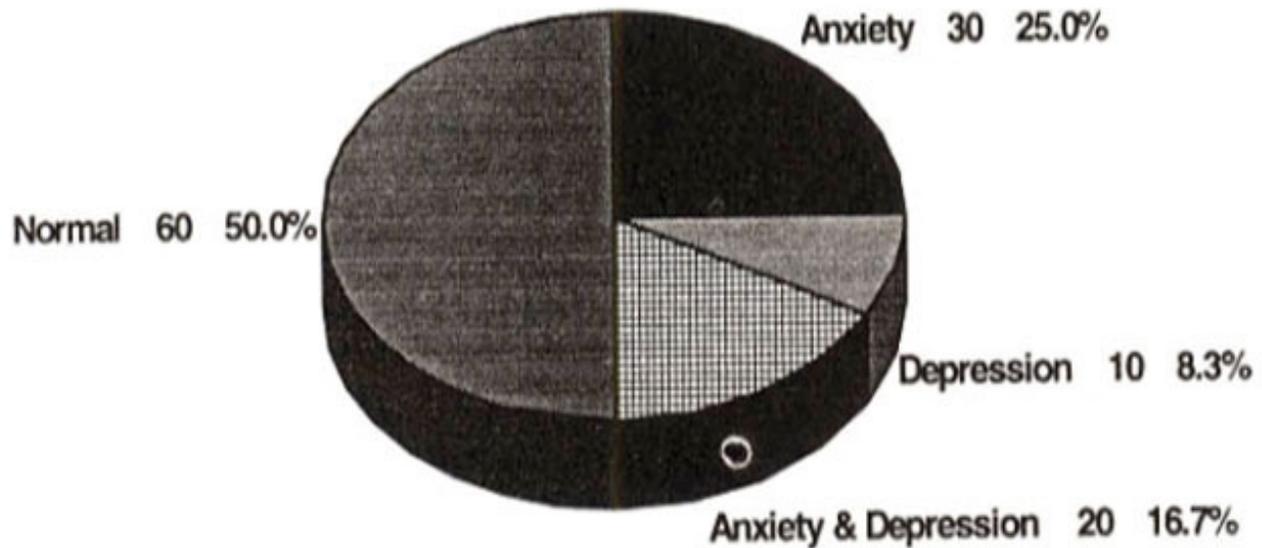


Figure 1. Prevalence of Anxiety and Depression in Women Attending Singal Medical Center Gilgit, Pakistan.

Figure 1 shows age distribution alone. A significant peak was observed in the 16-35 years age group. During the two month study period, 120 women belonging to the age group of 16-60 years, attended the SMC. The study results are divided into two sections:

1. Demographic data for the women.
2. Estimated prevalence of psychiatric disorders.

it was found that 50% (n=60) of the total women in the study population suffered from psychiatric disorders; 25% (n=30) of them had anxiety neurosis, 17% (n=20) had anxiety and depression and 8% (n=10) were found to be depressed (Figure 3).

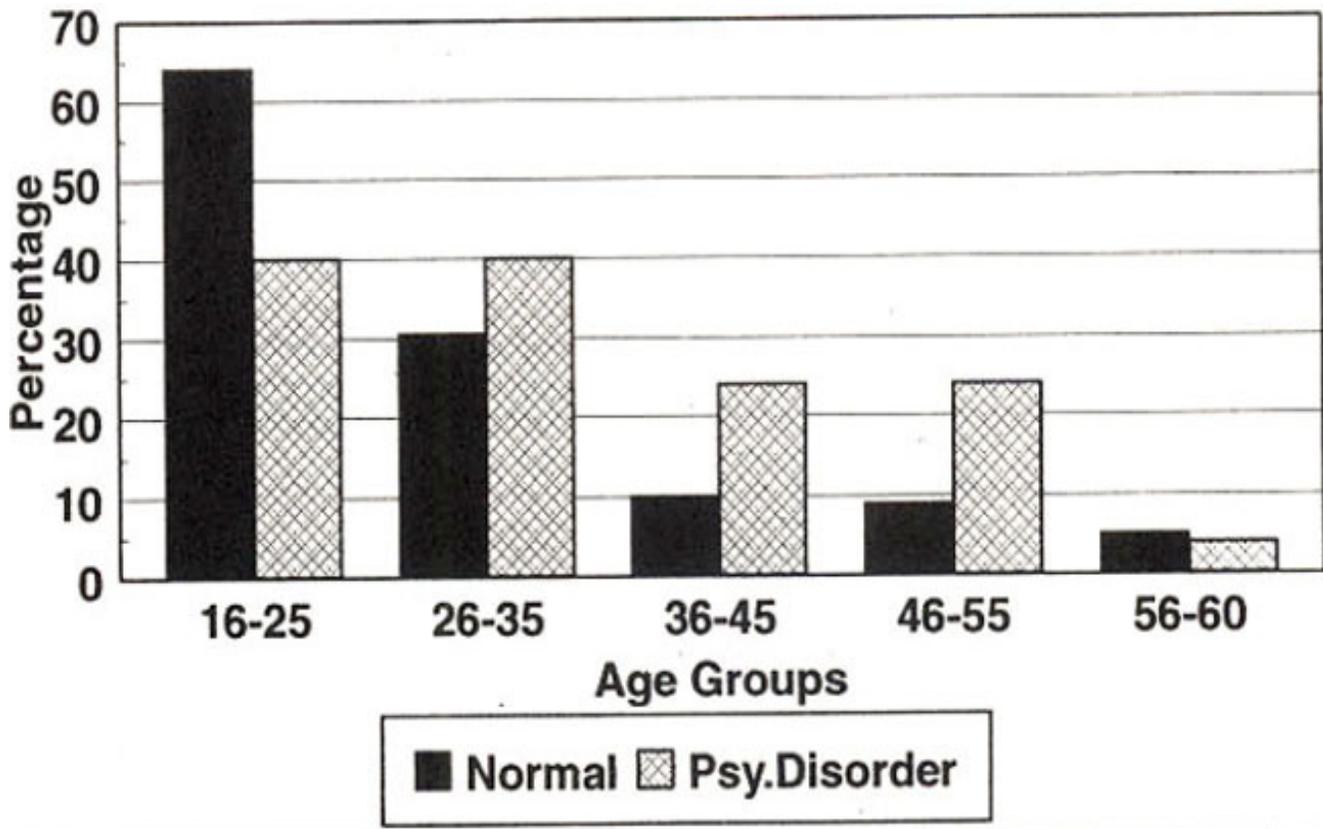


Figure 3. Age Distribution of Women with Psychiatric Disorders.

Compared to the prevalence of anxiety and/or depression in the urban areas of Pakistan<sup>5</sup>, this result was highly significant ( $p=0.001$ ).

### Discussion

In the Western world it is believed that people living in rural non—westernized cultures, are not familiar with psychological terminology or with the concepts of emotional distress<sup>6</sup>. This study provides evidence against the perceived view that mental disorders are uncommon among women who live in the remote parts of the world, away from the stresses of modern life, It also provides evidence of a high prevalence rate and supports previous studies conducted in other remote rural areas. En a community survey in the mountain villages of Chitral, Pakistan<sup>2</sup>, 46% of the women and 15% of the men met ICD-1 criteria for psychiatric disorders. This is considered to be a conservative estimate because it is based only on subjects with high' and 'very high' Bradford Somatic Inventory (BSI) Scores.

Our estimated prevalence of psychiatric disorders (50%) in women is higher than that reported from the remote areas of Olinda. Brazil, (46%) or the urban slums of Mumbai, (25-28%)<sup>7</sup>.

In the present study, the highest peak of the psychiatric disorders was in the 16-35 years age group and then declined abruptly with only 5-8% prevalence of psychiatric disorders in tile 45-55 years age group. This may be due to early marriages, early motherhood, repeated pregnancies and difficulty in adjusting with in-laws ill joint family system in the Northern Areas of Pakistan.

In a similar study in Chitral, married women aged 18-30 years had slightly higher BSI scores than single women in the same age group<sup>2</sup>. Studies from India in the 1960s and 1970s have indicated that nuclear families were conducive to depressive disorders and that joint family systems had a protective role in counteracting the pathogenic effects of bereavement and other losses<sup>8</sup>. Contrary to these results

we found that the presence of more than 12 household members in a single household, was a risk factor for psychiatric disorders for the woman of the house ( $p < 0.05$ ). This may be due to difficulty in adjustment with in-laws, lack of autonomy and increased workload.

Mumford's study showed significantly lower BSI-21 scores in literate women than in the illiterate. We found similar results in the present study, 58% of illiteracy was seen in normal women as compared to 70% in women with psychiatric disorders ( $p < 0.001$ ).

It has been seen that lack of formal education is a major risk factor for developing psychiatric disorders, as it is felt that education provides coping mechanisms in more than one way. It raises the self-efficacy and therefore, the self-esteem of a woman, It also makes her feel less helpless in difficult situations and gives a greater sense of control over her environment<sup>9</sup>. There was no statistically significant difference of the presence of psychiatric disorders in married and single women ( $p = 0.003$ ).

Brown and Harris have reported the presence of three or more children as a vulnerability factor, especially if the youngest child was below 6 years of age<sup>10</sup>. This is supported by the present study also, whereas the presence of three or more children did not emerge as a risk factor in Chitrali women<sup>2</sup>. Poor mental health of mothers can have an adverse effect on the behavior and development of their a child<sup>7</sup>. This is a medical center based study and has obvious limitations in terms of patient selection.

As Mumford's study is the only study which was done in the Northern Areas, we had compared our results with it, though it is community-based and ours is center based.

The high prevalence of psychiatric morbidity in women attending Singal Medical Center is alarming as women's mental health is of basic importance. not only to themselves, but also to the various roles of women. specially as mothers. wives, housekeepers and sometimes as wage-earners, as well as for the well-being of other members of the family. The next step would be to conduct a community based survey to determine the prevalence of risk factors for anxiety and depression. So that further initiatives could be taken and appropriate interventions instituted to curtail the burden of this disease.

## **Acknowledgements**

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