Frequency of anxiety and depression in patients with pain visiting pain clinic

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Abstract
Objective: This study was aimed to see the frequency of Anxiety and Depression in patients with pain reported at a pain clinic
Design: Cross sectional study
Setting and duration: Department of Psychiatry & Anesthesiology Abbasi Shaheed Hospital, Karachi Medical & Dental College Karachi from Aug 2012 to Oct 2012.
Method: All those patients with severe and chronic pain, who were referred for pain management at pain clinic of Anesthesia department, were included in the study. The sample included patients of both sexes and all ages, irrespective of their marital and educational status. A total of 118 patients, fulfilling the inclusion criteria were enrolled for the study. A written informed consent was taken from all these patients and their demographic details were obtained by using a Performa specially designed for this purpose. The diagnostic criteria of DSM IV(diagnostic and statistics manual) for Depression and anxiety disorders was used for clinical assessment and then the selected sample was administered Urdu version of HADS (Hospital Anxiety Depression Scale) to establish the presence of Anxiety & Depression. HADS is a widely used instrument in clinical practice and it is a 14 item self administered questionnaire designed to assess the magnitude of anxiety & depression in the selected sample. All the findings were recorded, compiled and tabulated.

Results: A total of 118 patients comprising 34 males and 84 females ranging between 28-72 years of age with a mean age of 47.4 years completed the study. Of the patients studied, 84 were married and 34 were unmarried. 38% of the patients had chronic backache while 32% had the medical diagnosis of prolapsed inter-vertebral disc. In the studied sample of 118 patients, 53 % had depression, and 44 % had anxiety.

Conclusion: Anxiety and Depression are common co-morbidities in patients suffering from pain

Keywords: Pain, Anxiety, Depression, HADS, DSM

Introduction:
Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage. Pain is one of the commonest presentation and a major concern for the patients in clinical practice and in many cases it remains a challenging problem for both patients and therapists. Pain is a major symptom in many medical conditions, and severe and chronic pain, if untreated, can significantly interfere with a person’s quality of life and general functioning. Pain interferes with sleep, impairs activities of daily living and reduces the productivity which may lead to a poor quality of life. Pain also provokes an emotional response in the sufferers and one is expected to have irritability and agitation and if pain gets teasing and prolonged, the patient may feel constantly tense and stressed. Over the time, this constant stress can result in dif-
ferent emotional problems and mood changes including anxiety and depression. Literature review suggests that psychological factors are strongly associated with persistent pain as found by Danielle A W et al. in their study of patients with low back pain. Matthew J Bair et al. reported a strong association of depression and pain as they found in their literature review that 52% of patients attending the pain clinics had depression while 38% of those attending psychiatric clinics and 56% of those attending the orthopedic clinics with pain as their chief complaint were found depressed. Adrienne J et al. reported that in primary care setting, those patients who are suffering from different kinds of pain are approximately 2.5-10 times more likely to present with different kinds of anxiety related disorders and major depressive disorder. Martha Castro found same association of pain with anxiety and depression in her study of 400 patients. These findings were also supported by work of Abdul Waheed and Nadia Azad, done in local perspective. Abdul Waheed in his study at a rheumatic clinic of a tertiary care hospital found 65.8% patients suffering from anxiety and depression while Nadia Azad and her co-researchers, in their study, reported a prevalence of 42% depression and 65% anxiety in their sample population of another rheumatology clinic.

As elsewhere in the world, pain is a frequently seen clinical problem in our culture as well and all aspects related to pain needs to be studied. Moreover psychiatric morbidity is also present in our population to a significant extent both in urban and rural population as reported by Niaz U and Mumford DB. The association of common morbidities like pain and psychological disturbances needs to be studied further for early identification and effective planning for treatment of these co-morbid states. Timely support and treatment can facilitate the improvement of overall functioning and quality of life of these individuals. It seems appropriate that patients attending the pain clinics should be evaluated for the presence of psychiatric morbidity where all kinds of painful conditions are referred and an association of psychological problems with pain due to different physical illnesses can be explored.

Keeping in mind this background, the present study was aimed to assess the frequency of anxiety and depression in patients attending the pain clinic at a tertiary care hospital.

**Material & methods:**

This cross sectional study was carried out at the department of Psychiatry & department of Anesthesiology, Abbasi Shaheed Hospital, and Karachi Medical & Dental College Karachi from August 2012 to October 2012. All those patients with severe and chronic pain, who were referred for pain management at pain clinic of Anesthesiology department, were included in the study. The sample included patients of both sexes and all ages, irrespective of their marital and educational status (ability to read and write). Patients with known psychiatric illnesses were excluded from study. A written informed consent was taken from all these patients and their demographic details were obtained by using a Performa specially designed for this purpose. Following selection of cases, the patients were interviewed and criteria for depression and anxiety disorders given in DSM IV were used for clinical assessment. The sample group was then administered Urdu version of HADS (Hospital Anxiety Depression Scale) to establish the presence of Anxiety & Depression. HADS is a widely used instrument in clinical practice and it was developed by Zigmond & Snaith. It is a 14 item self administered questionnaire designed to assess the magnitude of anxiety & depression in the selected sample. Seven of the items are related to measure anxiety and seven others for depression. The cut off value is 7 each for anxiety & depression. The HADS has been translated in different languages and widely used in more than 25 countries since its original development. Herrmann, in an extended review, reported that the HADS has demonstrated reliability and validity when used to assess medical patients. Bjelland reached similar conclusions in his review 5 years later. Urdu version of HADS was used for this study. Its Urdu version was translated and evaluated by Mumford et al. and since then it has been used for several studies.
Results:
A total of 118 patients fulfills the inclusion criteria were included in the study. There were 84 females (71%) and 34 males (29%), the minimum age of sample group was 28yrs and maximum was 72yrs with a mean age of 47.4 yrs. Maximum number of patients (46) were aged between 46-55yrs (38.9%). Of the enrolled patients, 83 were married (70%) and 35 were unmarried (30%). Of the total sample, 54 (46%) were educated and 64 (54%) were uneducated.

Table 1 shows the demographic information of the participants.

Upon screening for psychiatric morbidity, using urdu version of HADS, Depression was found to be more frequently seen psychiatric morbidity than Anxiety. 63 patients (53%) out of 118 had depression while 52 patients (44%) out of 118 had anxiety. (Table - 2).

27 patients (23%) of the sample group were suffering from both anxiety and depression while 30 patients (25%) had neither anxiety nor depression. Depression was more prevalent in patients with pain of more than one year duration while anxiety was significant in pain of less than one year duration (Table - 3) Chronic backache was the most frequent reason for taking treatment for pain as 45 patients (38%) had backache followed by patients of prolapsed inter vertebral disc which were 38 (32%). Table 4 shows the medical diagnoses of the sample group.

Discussion:
Evaluation of the data of this study is significant as it was conducted at a pain clinic which seems to be a better place to study psychiatric morbidity in patients suffering pain. The demographic features of the sample population in our study are comparable with data from the studies by Martha Castro et al and by Teixeira MJ in that patients were mostly females in our study (almost 70%). This observation was supported by studies of Abdul Waheed and Nadia Azad who also had female dominated sample in their work. Moreover herniated inter-vertebral disc was the major medical reason for pain in the studies by Martha and Teixeria while in our study it was the second most common medical diagnosis after chronic backache. Predominance of females in the sample group can be explained by the observation that as back pains are more prevalent in females as compared to males.

Majority of the patients of our sample belonged to middle age group which was also an observation in study by Abdul Waheed. Middle age is considered to be a period requiring active social and occupational functioning but due to persistent & severe pain these people had limited ambulation and poor functioning thus affecting their quality of life. However most of the patients in our study being married, had some kind of physical, social, moral and economical support from their spouses.

The results of the application of the HADS showed that a significant component of sample group were found to be suffering from anxiety & depression, this confirm findings in the study by Juang, Martha and Banks showing a strong association between chronic pain and psychiatric disorders. There seems to be a logical explanation for this association as continuous unbearable pain is likely to make the person handicapped and dependant on others for his/her physical, social and financial needs. This stressful situation, if not attended, can easily give
Psychiatric evaluation of this population would be useful for the screening of those patients who are planned for more invasive techniques such as anesthetic block and acupuncture, for the relief of pain. Timely and effective psychosocial therapeutic interventions may reduce the severity of psychiatric disorders and also of associated pain and the need of invasive techniques for relief of pain may be reduced

The present study shows that the frequency of depression was more noticeable in patients suffering from pain of longer duration while anxiety was predominant in subjects with short duration pain. This is understandable because continuous stress due to persisting pain for a longer period is more likely to have an effect on the mood of the individual in the form of depressive features with feeling of hopelessness and helplessness. On the other hand pain of less duration is likely to make a person anxious and irritable with feeling of restlessness and discomfort.

It is a matter of concern that a reasonably high number of patients attending a pain clinic were found anxious and depressed. This observation supports the idea that all the patients at a pain clinic should be routinely assessed for presence of psychiatric morbidity. This can be achieved by imparting clinical skills of psychiatric assessment to doctors working at pain clinics. Another way of dealing this issue is to refer these patients to a psychiatric clinic for timely identification of psychiatric morbidities. Another area of concern is to evaluate the risk of suicide in this population which may be the likely outcome due to persistent helplessness, hopelessness and worthlessness associated with depression and pain.

**Conclusions:**
It can be concluded from this study that pain is likely to have a significant association with anxiety and depression however the magnitude of this association can be influenced by severity, cause and duration of pain. Different demographic variables like age, gender, educational level and marital status can also effect this association to some extent. Keeping in mind the limitations of this study that sample size was not very big and the study reflected the problem at one tertiary care hospital of the city, similar studies at other centers with bigger sample size would give a better idea of the extent of the problem.

**References:**
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4. Adrienne J.Means Christensen, Peter P Roy Byrne, Cathy D Sherbourne Relationship among pain, anxiety and depression in primary care Published 2007 wiley-Liss Inc

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**Table 3: Duration of pain and Psychiatric Morbidity (n = 118)**

<table>
<thead>
<tr>
<th>Duration of pain</th>
<th>Psychiatric morbidity</th>
<th>No of patients</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than one year</td>
<td>Only Depressed</td>
<td>26</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Depressed &amp; Anxious</td>
<td>16</td>
<td>13.5%</td>
</tr>
<tr>
<td></td>
<td>Only Anxious</td>
<td>10</td>
<td>08.5%</td>
</tr>
<tr>
<td></td>
<td>Neither depressed nor Anxious</td>
<td>13</td>
<td>11%</td>
</tr>
<tr>
<td>Less than one year</td>
<td>Only Depressed</td>
<td>10</td>
<td>08.5%</td>
</tr>
<tr>
<td></td>
<td>Depressed &amp; Anxious</td>
<td>11</td>
<td>09.3%</td>
</tr>
<tr>
<td></td>
<td>Only Anxious</td>
<td>15</td>
<td>12.7%</td>
</tr>
<tr>
<td></td>
<td>Neither depressed nor Anxious</td>
<td>17</td>
<td>14.5%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>118</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Table 4: Medical Diagnosis (Reasons for taking pain treatment) (n = 118)**

<table>
<thead>
<tr>
<th>Medical Conditions</th>
<th>Prolapsed Inter Vertebral Disc</th>
<th>Chronic Backache</th>
<th>Frozen Shoulder</th>
<th>Malignant conditions</th>
<th>Knee Arthritis / Arthralgia</th>
<th>Miscellaneous</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of patients</td>
<td>38</td>
<td>45</td>
<td>09</td>
<td>12</td>
<td>07</td>
<td>07</td>
<td>118</td>
</tr>
<tr>
<td>Percentages</td>
<td>32 %</td>
<td>38 %</td>
<td>8 %</td>
<td>10 %</td>
<td>6 %</td>
<td>6 %</td>
<td>100%</td>
</tr>
</tbody>
</table>
14. Saima Asghar, Rizwan Taj, Sabah Asghar Can cannabis abuse leads to anxiety and depression? JPPS 2005 Volume 2 Number 1 page 45