ORIGINAL PAPER

A Study of Quality of Life in Patients Suffering from Post Traumatic Stress Disorder in Comparison to Patients Suffering from Major Depressive Disorder

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Abstract

Introduction: There has been a growing interest in the knowledge about how post traumatic stress disorder affects functioning and the quality of life (QoL). This has been prompted by the concerns about the survivors of current wars and disasters, man-made and natural. Kashmir has witnessed both political conflict and natural disasters over the last three decades. Aims: This study was undertaken to compare the quality of life in patients suffering from posttraumatic stress disorder (PTSD), with those suffering from major depression (MDD). It was hypothesized that patients with PTSD have a lower quality of life, compared to those with MDD. Methods: 100 consecutive patients with the diagnosis of PTSD and a matched group of 100 patients with MDD as comparison group attending the outpatients, of Psychiatric Diseases Hospital Srinagar were recruited. All diagnoses were based on DSM IV TR diagnostic criteria. World Health Organization Quality Of Life - BREF (WHOQOL-BREF) questionnaire was used to compare the quality of life in both groups. The WHOQOL-BREF instrument comprises 26 items, which measure the following broad domains: physical health, psychological health, social relationships, and environment. Results: A comparison of mean scores on overall quality of life, general health and four domains of health between two groups revealed that the patients with PTSD scored consistently lower on physical, psychological, social and environmental parameters of health, than the MDD group with the difference being statistically significant. Conclusion: Our study shows a significantly lower quality of life, in different domains, in PTSD patients as compared to MDD. The lower QoL could be due to comorbidity, exposure to recurrent traumatic events and lack of rehabilitative provisions. Presence of comorbidity in the PTSD group was a potential limitation which needs to be
studied further. Further work is needed to explore this subject taking into account the potential confounding factors.

Keywords: PTSD, MDD, Co-Morbidity, Quality of Life, Trauma, Conflict

Introduction

Psychiatric disorders may not be fatal per se, but the impairment they cause to one’s life is enormous. The psychiatric disorders are a major public health concern, as people with these disorders experience significant disability with regards to functional limitations in personal, physical and societal realms. There has been an interest in knowing how PTSD affects functioning and quality of life (QoL), prompted in part by concerns about survivors of current wars and recent human caused and natural disasters. In the legal arena, functional impairment may be more important than diagnosis when determining monetary damages. ‘Functioning’ is a rather broad construct that is labeled in different ways (e.g., functioning, disability, illness intrusiveness, well being, interference, activities of daily living, QoL). Although distinctions do exist, these terms are often used interchangeably. Functioning measures range from crude face-valid single items to more comprehensive, psychometrically supported instruments.

The World Health Organization defines QoL as: "the individual's perception of his/her position in life in the context of the culture and value system in which he/she lives and in relation to his/her goals, expectations, standards and concerns." This definition reflects the multidimensional nature of QoL as the subjective evaluation is embedded in the individual's physical health, psychological state, level of independence, social relationships, personal beliefs and relationships to salient features of the environment.

The issue of comorbidity is especially relevant to the measurement and interpretation of functioning and QoL in PTSD. Despite high rates of comorbidity with other mental and physical disorders, many studies do not assess the role of PTSD independent from these other problems. Several studies of Vietnam veterans examining the impact of PTSD on QoL by a wide range of QoL measures, show that PTSD have negative influence on QoL in both females and males. Also QoL studies based on civilian populations have been shown to predict QoL impairment in patients diagnosed as suffering from PTSD. Also patients with post-traumatic stress disorder (PTSD) report a poorer subjective quality of life than patients with other anxiety disorders.

How PTSD symptoms after exposure to trauma influence QoL is less known, as well the impact of PTSD on QoL over time. As far as we know, not many studies have been undertaken comparing the QoL in patients with PTSD and major depression, bearing in mind the prevalence of depression and its comorbidity with PTSD. The present study aimed to compare the quality of life (QoL) in patients with diagnosis of PTSD and a matched group of patients with a diagnosis of MDD using WHOQOL-BREF scale.

Methods

This study was conducted in the Department of Psychiatry, Government Medical College
Srinagar India. 100 consecutive patients with the diagnosis of Post Traumatic Stress Disorder (PTSD) presenting to the Outpatient department were included in the study from May 2005 onwards. A matched group of patients with Major Depressive disorder diagnosis attending the Outpatient department were recruited as comparison group.

All diagnoses were based on DSM IV\textsuperscript{9} diagnostic criteria. After screening a detailed semi-structured interview with all the relevant items from MINI Kid (Mini International Neuropsychiatric Interview)\textsuperscript{10} [based on DSM IV] was administered to all the cases included in the study. Finally, World Health Organization Quality Of Life - BREF (WHOQOL-BREF) questionnaire was administered\textsuperscript{11}. Scores on Overall quality of Life facet (Q1), General Health facet (Q2), and four domains of QoL (Dom1 through Dom4) for each patient was calculated following scoring instructions of WHOQOL-BREF scale. Each score, if not a whole number, was rounded off to the nearest one. Mean scores on Q1, Q2, Dom1, Dom2, Dom3 and Dom4 for PTSD and MDD patients was calculated, along with other statistical details, including range, standard deviation, standard error of mean etc. Mean scores for sub groups based on age, sex, education, occupation, socioeconomic status; marital status, residential status and duration of illness for each disease groups were separately calculated.

All the patients in the age range of 15 -64 years irrespective of their sex were included in the study, as WHO considers this age group economically productive\textsuperscript{12}. Patients with common comorbid psychiatric disorders like depression, anxiety disorders etc. were included in the PTSD patient group, and their comorbidities recorded. The patients in depressive group were included without any major co-morbidity. Patients with a history of psychotic disorder and comorbid medical disorders (including cerebral palsy, epilepsy, congenital genetic disorders, deafness and mutism) were excluded from the study.

World Health Organization Quality Of Life - BREF (WHOQOL-BREF)

The WHOQOL-Bref is a self-report scale that consists of 26 items. It is a multilingual, multicultural generic quality of life scale, developed across 15 field centers\textsuperscript{4}. The WHOQOL-Bref includes four domains related to QoL: physical health, psychological health, social relationships and environment. In addition, two items are examined separately, namely the perception of overall quality of life and perception of overall health. The WHOQOL-Bref has been demonstrated to have satisfactory discriminant validity, internal consistency and test-retest reliability\textsuperscript{4,11}. The items are rated on a 5-point Likert scale, reflecting intensity, capacity, frequency or evaluation. The items inquire "how much", "how completely", "how often", "how good" or "how satisfied", with possible answers ranging, from ‘very satisfied’ [5] to ‘not at all satisfied’ [1]. The range of scores in each domain is from 4 to 20, where a higher score indicates a better QoL. The four domain scores denote an individual’s perception of quality of life in each particular domain. Domain scores are scaled in a positive direction (i.e. higher scores denote higher quality of life). The mean score of items within each domain is used to calculate the domain score.

Analysis

Statistical difference between the mean scores in the subgroups in each disease population and between the two disease
populations was evaluated using test of means (Mann-Whitney test) or test of proportions (One way ANOVA), as appropriate. Statistical analysis was carried out using Minitab statistical software.

**Results**

The characteristics of patients suffering from PTSD are tabulated as shown in Table 1. Patients with MDD were adequately matched with PTSD.

**Table 1.** The characteristics of patients suffering from PTSD

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Male=42</th>
<th>Female=58</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>Age(Yrs)</td>
<td>15-30=41</td>
<td>31-45=40</td>
<td>≥46=19</td>
</tr>
<tr>
<td>Residence</td>
<td>Rural=86</td>
<td>Urban=14</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>Illiterate=53</td>
<td>Under Graduate=39</td>
<td>Graduate= 5</td>
</tr>
<tr>
<td>Occupation</td>
<td>Student=13</td>
<td>Housewife=51</td>
<td>Govt. Employee= 7</td>
</tr>
<tr>
<td>Family Type</td>
<td>Joint=59</td>
<td>Nuclear=32</td>
<td>Extended=9</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td>Upper Class=2</td>
<td>Middle Class=25</td>
<td>Lower Class=73</td>
</tr>
<tr>
<td>Religion</td>
<td>Islam=97</td>
<td>Hinduism=3</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td>Unmarried=23</td>
<td>Married=56</td>
<td>Widowed=21</td>
</tr>
<tr>
<td>Number of Traumatic Events</td>
<td>One=77</td>
<td>Two=19</td>
<td>&gt;2 =4</td>
</tr>
<tr>
<td>Type of Traumatic events</td>
<td>Witnessed=16</td>
<td>Experienced=73</td>
<td>Confronted=1</td>
</tr>
<tr>
<td>Onset</td>
<td>Acute=89</td>
<td>Delayed=11</td>
<td></td>
</tr>
<tr>
<td>Longitudinal Course</td>
<td>Acute=19</td>
<td>Chronic=81</td>
<td></td>
</tr>
</tbody>
</table>

MDD was the commonest co-morbidity (82%), followed by somatization (52%), panic (38%), conversion symptoms (15%), substance abuse (12%), GAD (10%). A minority of the patients had agoraphobia (8%), psychotic symptoms (6%) and OCD (3%). Further, 49% of the patients had experienced peri-traumatic dissociation.
Table 2. Comparing mean scores of functioning on various domains between PTSD and MDD patients

<table>
<thead>
<tr>
<th>DIAGNOSIS</th>
<th>Mean Q1</th>
<th>Mean Q2</th>
<th>Mean DOM1</th>
<th>Mean DOM2</th>
<th>Mean DOM3</th>
<th>Mean DOM4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTSD</td>
<td>1.53</td>
<td>1.44</td>
<td>8.01</td>
<td>7.93</td>
<td>9.25</td>
<td>9.78</td>
</tr>
<tr>
<td>MDD</td>
<td>2.44</td>
<td>2.35</td>
<td>11.11</td>
<td>9.25</td>
<td>11</td>
<td>12.34</td>
</tr>
</tbody>
</table>

U test value: 7169 7050 6475 8621 8167 7319
p<0.001 p<0.001 p<0.001 p<0.001 p<0.001 p<0.001

The table shows a significant difference between PTSD group and MDD group for the mean scores on Q1, Q2, DOM1, DOM2, DOM3 and DOM4.

Q1: Score on Question related to perceived overall quality of life
Q2: Score on Question related to perceived overall health
DOM: Domain Score
U test value: Mann Whitney test value

Discussion

Most of the patients diagnosed with PTSD in our study had a comorbid psychiatric disorder. Majority (82%) had symptoms of major depression, followed by somatization (52%), peritraumatic dissociation (49%), panic disorder (38%), conversion disorder (15%) and other disorders. Multiple comorbidities were seen in many patients. This profile of comorbidity was similar to that revealed by Firdosi. Higher level of depressive disorder and dissociation in PTSD patients has also been reported in an earlier hospital based study by Margoob et al.

In our study, a comparison of the mean scores on overall quality of life facet (mean Q1), general health facet (mean Q2) and four domains of health between PTSD and MDD patients reveals that PTSD patients score consistently lower on physical, psychological, social and environmental parameters of health when compared to MDD patients, and this difference assumes a statistical significance. In a study on quality of life impairment (QoL) in patients with anxiety and mood disorders, it was found that although 37% of patients with PTSD had a current or lifetime history of a depressive disorder, depressive comorbidity was not a significant predictor of quality of life scores. In another study, it was shown that PTSD severity remained a significant predictor of self-reported mental health impairment even after controlling for depressive symptoms and other variables, suggesting that it is not simply comorbid depression that is accounting for the functional impairments in the mental health domain.

Not many studies have been carried out to directly compare quality of life impairment in major depression with that in PTSD. Wittchen et al in a study comparing impairment in an anxiety disorder (generalized anxiety disorder) with that in major depression reported that patients with generalized anxiety had poorer quality of life scores than MDD patients. Studies suggest
that people who have been exposed to trauma experience more adverse health outcomes in a number of domains: self-reported health, morbidity, mortality, and health care utilization\textsuperscript{18}. The same authors have proposed an integrative model that relates trauma to physical health through psychological, biological, behavioral, and attentional mechanisms, and that supports PTSD as the key mechanism for this link\textsuperscript{19}. Results from the North Carolina component of the Epidemiologic Catchment Area study indicated that symptoms of posttraumatic stress were associated with impairment along several domains of functioning: social, financial, physical, and psychological. Individuals with posttraumatic stress were found to have more socioeconomic disadvantages and impaired functioning\textsuperscript{20}.

In a study on patients with PTSD, major depression, alcohol use disorder and those with more than one or none of these diagnoses, PTSD showed significant adverse effects on psychological, physical, and social functioning. Major depression showed a similar pattern. In contrast, alcohol use disorders primarily affected role functioning\textsuperscript{21}. Similarly, in a study, using WHOQOL-Bref, on quality of life in victims of non-domestic violence over a period of 12 months Venke et al found that the presence of PTSD symptoms predicted lower QoL, both from an acute and prolonged perspective\textsuperscript{22}.

Rapaport et al, using Quality of Life Enjoyment and Satisfaction Questionnaire to determine quality of life impairment in depressive and anxiety disorders, found that proportion of patients with clinically severe impairment with MDD (63\%) were almost equal to those with PTSD (59\%)\textsuperscript{15}. Kessler et al in an update to the original NCS prevalence data reported that the more patients with PTSD (36.6\%) qualified as being “serious” (based on several criteria, including work disability, role impairment, and suicide attempts), than those with MDD (30.4\%). Higher severity was significantly associated with greater interference with normal activities and with more psychiatric comorbidities\textsuperscript{23}. In this respect, our observations stand validated, especially considering high rates of comorbidity in our PTSD sample. Studies evaluating the effect of comorbid psychiatric disorders on the impairment caused by PTSD, however, have given mixed results, with some denying any incremental role\textsuperscript{15-16} while others suggesting it. A study of suicidality in Vietnam veterans showed that veterans with a diagnosis of PTSD plus depression or dysthymia were more likely to report suicidal thinking an behaviours, including suicide attempts, than were veterans with only one of the diagnoses\textsuperscript{24}. PTSD is clearly associated with impairment, and adding other disorders to PTSD does not always produce incremental impairment. It is possible that this may be due to the fact that there is a stronger link between PTSD and impairment than there is between other disorders and impairment, as noted by North and colleagues (52 percent for PTSD versus 27 percent for other disorders)\textsuperscript{25} but the research on this question is indeterminate.

Although much research has focused on the effect of comorbidity among various psychiatric disorders, only recently has research begun to pay attention to the synergy between psychiatric disorders, particularly PTSD, and medical conditions and to how that interaction can affect health status or disability. In a large study based on data from the National Co-morbidity Survey, men and women with PTSD were more than twice as likely to experience a
nonpsychiatric condition as those without PTSD, even after controlling for age, socioeconomic status, and major depression. Research also shows that relative both to nonpsychiatric control subjects and to subjects with psychiatric disorders other than PTSD, individuals with PTSD showed elevated rates of role-functioning impairment due to physical morbidity. These facts assume relevance in the Kashmir Valley’s scenario, where chronic physical illnesses are common, with access to medical care being deficient or delayed.

Studies have also shown that PTSD patients spend ten times more time in the hospitals as compared to depression patients, contributing to higher functional impairment over depression patients. Other studies too have emphasized quality of life impairment in PTSD patients. Schonfeld et al found that single disorder PTSD had significant adverse effects on eight areas of functioning, with effects comparable to depression among other disorders. Another study found high levels of impairment, comparable to levels seen in severe and chronic depression, in outpatients with PTSD on several self-reported and clinician-rated scales measuring quality of life. A putative reason for lower quality of life scores in our PTSD sample could be higher rates of chronicity. 81% of our PTSD patients were running a chronic course. Norris et al, using Composite International Diagnostic Interview to measure functional impairment in a non-western population, found that functional impairment was the best single predictor of duration (more than one year vs. less than one year) of PTSD symptoms. A study on PTSD patients seeking treatment, from our hospital shows that mean duration of illness in chronic PTSD patients at presentation was 45 months. The chronic course of PTSD could be explained on the grounds of chronic conflict situation of more than 3 decades, exposing individuals to repeated traumas. These findings are consistent with studies that people exposed to chronic combat are more likely to develop chronic PTSD. Studies have also revealed that traumas due to deliberate human malice (versus natural/accidental trauma) may be stronger predictors of PTSD and reduce recovery from it.

A sizeable 23% of our PTSD patients had been exposed to more than one significant traumatic event. A community based study from valley put lifetime prevalence of exposure to traumatic event(s) at 58.69%. These figures along with the facts that the people of the Kashmir valley have been weathering a chronic combat like situation for about three decades, which has put their coping to stretch, have ensured a protracted and chronic course of their symptoms. This has been further aggravated by absence of a meaningful mental health care network, indifferent attitude of the authorities towards the unmet mental health needs of the psychiatric patients, stigma, ignorance about the illness and consequent delayed treatment seeking. During the past few years, natural disasters too have struck the Kashmir valley, leaving the survivors grief struck and marooned for the sake of a proper psychosocial rehabilitation. The symptoms of PTSD and the accompanying impaired function may be continuous or sporadic, and are often exacerbated by the presence of adversity or new life stressors. With the presence of continuous traumatic insults and stressors the patients with PTSD continue to be aggrieved, and will be so in the future, unless effective strategies are formulated and implemented to identify, treat and rehabilitate them.
Conclusion

This study shows significant functional impairment in patients suffering from Post Traumatic Stress Disorder compared to Major depressive disorder group in various domains of life. The need for service development and provision of appropriate support and treatment at timely manner would help to alleviate the suffering and long term negative consequences on quality of life. Further studies are required to explore link between trauma, PTSD and QoL and development of appropriate and effective measures to treat the same.

Limitations of our study

One of the limitations of our study was that the comorbidities were not considered in the depressive group while as PTSD group has significant comorbidities which may be influencing quality of life independently, and needs further investigation. Diagnostic instruments (MINI & WHOQOL) used in our study were based on western populations and may not give the true outcome in our sample from a very different cultural and geographical background.

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