



CODEN [USA]: IAJ PBB

ISSN : 2349-7750

**INDO AMERICAN JOURNAL OF  
PHARMACEUTICAL SCIENCES**

SJIF Impact Factor: 7.187

<http://doi.org/10.5281/zenodo.4318786>Available online at: <http://www.iajps.com>

Research Article

**THE STUDY OF IMPACT OF FACIAL TRAUMA ON HUMAN  
PSYCHOLOGY**<sup>1</sup>Dr. Nafeesa Abdullah, <sup>2</sup>Dr. Anam Naseem, <sup>3</sup>Dr. Muhammad Sabir Raza<sup>1</sup>Bahria University Medical and Dental College, <sup>2</sup>Mohi is Din Medical College Mirpur AJK,  
; <sup>3</sup>FMH College Of Medicine and dentistry Lahore.**Article Received:** October 2020    **Accepted:** November 2020    **Published:** December 2020**Abstract**

**Background and objectives:** It has not been recorded as enthusiastically as other fields of studies, the Examination of the mental state of patients suffering from facial trauma, screening them for post-traumatic stress disorders (PTSDs) is rare. We believe that an early support system if provided to these patients in light of such psychological conditions can improve the overall quality of life.

**Aim of the study:** This study was conducted in Bahria University Medical and Dental College, It is a literature review which aims to assess the relation of mental state disorders vs facial trauma in relation to the prevalence, screening methodology, and to evaluate the prognosis of individuals subjected to psychological intervention/screening at an early stage of clinical examination. The research database for our study included Google Scholar, ScienceDirect, PubMed, and Medline. The keywords used to search the database were "facial trauma," and "PTSD" "psychological trauma,".

**Inclusion criteria:** Only meta-analyses, systematic reviews, and original research articles in the English language were included in the study.

**Exclusion criteria:** We did not include the correspondence to journal editors and clinician opinions in our study. The total number of search result articles was 459 results, we included only 8 articles in our study because they were the only articles which satisfied our inclusion criteria terms. The literature review showed that patients suffering from orofacial trauma had significantly increased levels of mental state disorders such as PTSD and generalized anxiety disorder, more so in victims of assault. The results of this literature review clearly point toward an increased prevalence of mental state disorders in patients suffering from facial trauma, which warrants for early intervention in this regard to improve the quality of life of these patients.

**Keywords:** facial trauma, psychological trauma, PTSD.

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Please cite this article in press Nafeesa Abdullah et al, *The Study Of Impact Of Facial Trauma On Human Psychology* ., *Indo Am. J. P. Sci*, 2020; 07(12).

**INTRODUCTION:**

Facial disfigurement regardless of what the explanation, inspires a by and large negative social reaction that prompts a further impeding effect upon the mental condition of a person. This is normally shown by pulling out from social interactions. [1] An overall conviction is found in populace that alluring people have higher confidence and have more noteworthy scholarly just as word related satisfaction. [2]

People with facial disfigurement will in general have changed self-perception and lower levels of self-esteem.[3]

What further mixes the issue is the way that documentation of the mental condition of patients with gained facial distortions is commonly poor. This is very awful, as the evaluation of mental sequelae can be performed utilizing moderately basic estimates, for example, an essential appraisal at the underlying phase of assessment, and moreover, this can be cultivated by nonmedical experts as well. [4]

A few appraisal instruments are accessible to assess the mental condition of patients with gained facial disfigurements, for example, the Montgomery and Asberg despondency rating scale (MADRS) which surveys the presence and along these lines the power of wretchedness in an individual, the European personal satisfaction—5 measurements (EQ-5D) which is a personal satisfaction list, the self-appraisal trial of musings in social association (SISST) which assesses considerations of a person in social connections, Hospital Anxiety and Depression Scale, and the Impact of Event Scale. [4] Table 1 shows the normally utilized mental evaluation devices in patients with obtained facial injury and their separate highlights.

In spite of the fact that it is a typical presumption that obtained facial injury would cause a profound mental effect upon an individual, it is shockingly hardly reported. In addition, doing a mental audit of the damaged is definitely not an extremely normal practice at focuses managing facial injury.

The reason for this examination was to lead a writing survey to uncover the different mental issues looked by patients of facial injury, solidify and present information with respect to the mental effect of facial injury, make clinicians mindful of

the mental condition of their patients, and advance sympathy and sound clinical practice to improve the personal satisfaction of such people alongside accentuation on the mental recovery of such patients.

What follows is a conversation of mental state corresponding to obtained facial injury under the specific heads of occurrence, horribleness, and in danger patients and finally, a proposed screening system to all the more likely assistance comprehend the mental issues tormenting an individual experiencing procured facial injury and the establishment of a potential administration methodology as proposed by the creator alongside specific suggestions to cling to when managing quite a patient populace.

**Aim:**

The point of this investigation was to play out a writing audit to survey the connection of mental state issues to facial injury regarding their predominance just as screening approach and furthermore to assess the guess of people exposed to mental mediation/screening at a beginning phase of clinical assessment.

**MATERIALS AND METHODS:**

The accompanying exploration information bases (alongside their looked through dates in sections) were looked in the examination: ScienceDirect (14.09.2019), Google Scholar (15.09.2019), PubMed (16.09.2019), and Medline (16.09.2019) utilizing the watchwords "mental injury," "facial injury," and "PTSD." The referenced catchphrases were chosen dependent on a pilot search led by the writer, in which it was discovered that most quantities of results were acquired by utilizing this arrangement of watchwords, as these were constantly referenced in articles with other, frequently interchangeable catchphrases, for example, "facial injury," "mental impacts," and "mental sequelae." A relationship was additionally seen by the writer in the notice of posttraumatic stress issue (PTSD) in articles managing issues, for example, summed up uneasiness problem, posttraumatic wretchedness, and posttraumatic body dysmorphia which prompted the utilization of this specific catchphrase as it filled the double need of yielding outcomes straightforwardly relating to PTSD and, simultaneously, yielded results managing other (various) mental impacts following facial injury.

**Table 1 Psychological assessment tools**

Assessment Tool	Features
Montgomery and Asberg depression rating scale (MADRS) <sup>5</sup>	<ol style="list-style-type: none"> <li>Administered by third-party clinician.</li> <li>Relies on objective assessment, hence, inadvisable to self-administer.</li> <li>Items include: Apparent sadness, reported sadness, inner tension, reduced sleep, reduced appetite, concentration difficulties, lassitude, inability to feel, pessimistic thoughts, suicidal thoughts</li> <li>Scored from 0–6 based on how the patient has been feeling over the past 1 week.</li> </ol>
European Quality of life 5 dimensions (EQ-5D) <sup>6</sup>	<ol style="list-style-type: none"> <li>Cognitively undemanding</li> <li>Can be used in postal surveys, interviews, in clinics.</li> <li>To be completed by the respondents themselves</li> <li>Instructions for responding are provided.</li> <li>Items include mobility, self-care, usual activities, pain/discomfort, anxiety/depression.</li> <li>Scored out of 5 possible responses based on how the respondent is feeling on that particular day.</li> </ol>
Self-assessment test of thoughts in social interaction/Social Interaction Self-Assessment Test (SISST) <sup>7</sup>	<ol style="list-style-type: none"> <li>Self-report test</li> <li>Total of 30 items with 15 positive and 15 negative statements</li> <li>Answer scores range from 1–5 i.e., ‘hardly ever had the thought’ to ‘very often had the thought’.</li> </ol>
Hospital anxiety and depression scale <sup>8</sup>	<ol style="list-style-type: none"> <li>Self-assessment scale</li> <li>Total of 14 items scored from 0–3</li> <li>Two subscales of Depression and Anxiety</li> <li>0–7: Normal, 8–10: Borderline abnormal, 11–21: Abnormal</li> </ol>
Impact of event scale <sup>9</sup>	<ol style="list-style-type: none"> <li>Set of 15 questions</li> <li>Measures the distress associated with an event</li> <li>Responses are- 0: Not at all, 1: Rarely, 3: Sometimes and 5: Often.</li> <li>The sum gives the total stress score</li> <li>0–8: no meaningful impact, 9–25: impact event/patient may be affected, 26–43: powerful impact event/patient is certainly affected, 44–75: severe impact event/ patient’s ability to function altered.</li> </ol>

**RESULTS:**

An aggregate of 361 outcomes were prohibited dependent on title and language; 67 records were barred for being referred to with more than one inquiry term; and 17 records were avoided for not being meta-examinations, orderly audits, or unique exploration. For being correspondence/clinical assessment, three records were barred dependent on investigation of edited compositions.

Out of an aggregate of 459 outcomes, just 11 articles satisfied the incorporation rules of the examination. The writing survey demonstrated that patients experiencing orofacial injury had significantly expanded degrees of mental state problems, for example, PTSD and summed up tension issue, all the more so in casualties of attack (► Table 2).

**Incidence:**

This part examines the rate of mental issues among patients with procured facial disfigurement. Bisson *et al* in their examination evaluating 50 patients at 1 and 7 weeks of post-injury, utilizing the Hospital Anxiety and Depression Scale and the Impact of Event Scale, expressed that people with obtained facial injury had significant probability (27%) of advancing to create PTSD by roughly 7 weeks after the injury took place. [4] In an investigation led by Balakrishnan *et al*, in an aggregate of 115 facial and neck consume patients it was discovered that around 95% of the example size had concerns with respect to the fate of their families because of their procured disfigurement. A further 26% of the patients were of the conviction that the presence of their disfigurement would finish in the deficiency of their business and occupation. It was presumed that

expanded liquor utilization, conjugal/relationship issues, and modification in work status existed in patients inside 9 months of enduring halfway thickness facial burns.<sup>10</sup> Shepherd et al in their investigation confirmed the improvement of mental pain, wretchedness, and tension in patients inside 3 months of going through break of the mandible.

Hermes et al have likewise underscored the presence of elevated levels of nervousness in patients going through oral and maxillofacial medical procedure procedures. [11]

#### **Morbidity of Psychological Conditions in Facial Trauma:**

To address the mental effect of facial injury, one should know about the sorts of mental states which can be normal in patients with obtained injury. An expanded comprehension of this would guarantee a sufficient screening method for the equivalent alongside an improvement of the general personal satisfaction of patients. The accompanying area manages perceiving grimness of mental issues related with facial injury.

#### **At-Risk Individuals:**

Recognizing certain “at-risk” individuals would alert the clinician toward the need for a psychological evaluation of the patient. These certain premorbid factors have been identified to tag patients as being “at risk” of developing a psychological problem post-facial trauma.

1. Premorbid psychiatric illness.<sup>4</sup>
2. Family support regarding traumatic event.<sup>21</sup>
3. Survivor guilt.<sup>22</sup>
4. Litigation-related issues.<sup>23</sup>

5. Etiology of trauma (industrial/accidental).<sup>24</sup>
6. Socioeconomic status.<sup>25</sup>
7. Other family members involved in the same traumatic event.<sup>16</sup>

#### **Depression and Anxiety:**

Depression and anxiety evaluated in patients of facial injury may regularly be subthreshold and may not qualify as a mental problem in essence. Drugs that the patient might be bringing with pity and distress over the occasion might be confused with despondency. Subsequently, the nonattendance of fulfillment of analytic measures of mental problems makes demonstrative difficulties which lead to inappropriate administration of such conditions. This thusly prompts helpless treatment consistence and ultimately inadmissible restoration outcomes. [12,13]

The patient is likewise stressed by the length of the treatment and tormented by questions with respect to his recuperation. This is com-beat by the presence of depression and anxiety.

#### **Frustration:**

It happens quite often that the recuperation of patients of facial injury is protracted including numerous medical procedures enveloping a multi-disciplinary restoration measure. This adds to the disappointment of the patient. [14]

It has additionally been noticed that recuperation is blocked alongside expanded degrees of stress in patients who have obtained wounds to key facial territories, for example, the eyes, ears, and dental injuries. [15]

**Table 2 Studies assessed and their highlights pertaining to the psychological impact on facial trauma**

Study	Highlight
Bisson <i>et al</i> <sup>4</sup>	6. 27% of patients suffered from PTSD at the end of follow-up
	7. High scores on hospital anxiety and depression scale and impact of event scale
	8. Assault was the predominant etiology
	9. Highlights poor documentation of psychological aspects of facial trauma
	10. Even nonmedical professionals can conduct initial survey
Balakrishnan <i>et al</i> <sup>10</sup>	4. 95% of traumatized patients feared for the futures of their families in light of their acquired disfigurement
	5. 26% of patients feared for loss of employment and livelihood
	6. Increased alcohol consumption, relationship problems, and altered employment scenarios occurred post trauma
Hermes <i>et al</i> <sup>11</sup>	6. High scores on state trait anxiety inventory
	7. High levels of anxiety pertaining to oral and maxillofacial surgery procedures
	8. Females were more anxious
	9. Outpatients and those being treated under local anesthesia exhibited higher levels of anxiety
	10. In cases of recurrent treatment of the maxillofacial region, there is no alteration in anxiety with experience
Shepherd <sup>12</sup>	Depression, anxiety, and distress developed in patients suffering from fractures of the mandible
Meningaud <i>et al</i> <sup>13</sup>	4. Most patients seeking facial cosmetic surgery had demand regarding a specific physical attribute or feature
	5. Patients lacked self-confidence in social interactions and sought aesthetic facial surgery to remedy the same
	6. Aesthetic surgery must be conducted keeping in mind its consequences in their entirety
Vanswearingen <sup>14</sup>	Recovery from facial trauma is lengthy and multidisciplinary which leads to an increase in the patient's frustration
Shaikh and Worall <sup>15</sup>	Increased stress and hampered recovery in patients with injuries to key facial areas
Glynn <i>et al</i> <sup>16</sup>	4. Predictors of PTSD established as mental/social service needs, lifetime use of social service, prior trauma, stress-inducing life event prior to trauma
	5. Patients disadvantaged socioeconomically exhibit poor psychological outcomes
	6. Surgical management of orofacial trauma in lower socioeconomic group patients must include management of psychological state and service requirements
Crowley <sup>17</sup>	3. Females are more concerned about facial disfigurement
	4. Elderly females reported higher levels of posttraumatic pain
Thomas and Goldberg <sup>18</sup>	Dysmorphophobic patients reported greater dissatisfaction with facial appearance, anxiety, and depression
Auerbach <i>et al</i> <sup>19</sup>	4. Postsurgical patients exhibited greater levels of acute stress disorder
	5. Emotion-focused strategies for coping provided patients with greater satisfaction with facial appearance
	6. Patients who were severely injured seemed more controlling

**Post-traumatic Stress Disorder:**

Facial injury can happen regularly in relationship with mechanical setbacks and other hazardous conditions, inclining such patients to the advancement of PTSD.

PTSD is portrayed by shirking of contemplations, feelings identified with the awful accident, reexperiencing the injury, and autonomic sensory system hyperarousal. [16,17]

Concerning discouragement and tension, patients may likewise encounter subclinical types of PTSD, that is, side effects that don't completely fulfill the symptomatic models of PTSD. It has likewise been noticed that patients announcing PTSD side effects post-facial injury were bound to likewise report expanded pressure and deficient social help preinjury. [18]

#### **Gender Predilection for Morbidity:**

Females, being discovered to be more worried about facial appearance, have been found to have higher disfigurement worries than men experiencing facial injury. What's more, older female patients have additionally been recorded to have encountered more prominent measures of posttraumatic torment when contrasted and their male counterparts. [19,20]

It has been accounted for that the use of uninvolved adapting styles to oversee disfigurement related pressure would bring about an undermined nature of life. [26]

#### **Screening Procedure:**

In light of the earlier presented data, it would be prudent practice to employ a screening procedure to identify the presence of psychological disorders in patients with acquired facial trauma. This would help in alerting of threats to the quality of life of patients and would also ensure an effective management of the patient as a whole. A timely referral to mental health professionals can rearranged the clinician feels that the patient may be suffering from or may be predisposed to the development of psychological disorders postinjury.

Certain factors can help aid in the identification of such disorders [27]:

1. Anger.
2. Irritability.
3. Poor social and family support.
4. Long hospital stays.
5. Multiple surgeries.
6. Crying spells.
7. Depressed mood.
8. Loss of hope of recovery.
9. Poor financial support.
10. Loss of loved ones in traumatic event.
11. Loss of occupation.
12. Flashbacks.
13. Sleep disturbances.
14. Chronic pain.
15. Past history of psychiatric illness.

16. Preoccupation with facial appearance post recovery.
17. History of familial psychiatric illness.

#### **Recommendations:**

What follows are sure proposals from the creator to help set up an essential administration convention for patients who may potentially be experiencing or might be inclined to mental issues relating to obtained facial injury. Starting evaluation of patients to screen for mental issues should be led by using an organized meth-odology, for example, that of mental appraisal devices. Many of these apparatuses are self-appraisal and are not intellectually requesting which would furnish the patient easily of noting the things. Likewise, the underlying mental appraisal can be led by nonmedical work force as well. [4]

It should be perceived that many of the damaged patients are afraid for their families because of their procured deformation, business, and occupation and it is basic that such feelings of dread be relieved/redressed. [10]

Female patients have been identified as being more inclined to tension identified with oral and maxillofacial medical procedure strategies and the clinician should remember this. Likewise, it has been discovered that methodology to be embraced incite more elevated levels of tension as contrasted and those under broad sedation and the patients should be directed in like manner prior to being worked under nearby sedation or, if the clinical fitness of the patient licenses, be taken under broad sedation. The clinician should likewise not anticipate that the patient should feel less restless basically in light of the fact that he/she has gone through a medical procedure in the maxillofacial area already, as it has been discovered that there is no adjustment in nervousness with intermittent therapy acted in this region. [11] Hence, the patient should be managed as going through a medical procedure for the first time as far as directing and sympathy displayed by the medical procedure group.

Patients with cracks of the mandible have been appeared to go through gloom, expanded degrees of tension, and distress<sup>12</sup> and, subsequently, such patients should be screened and advised fittingly.

Patients requesting tasteful medical procedure should be treated all in all and not as a specific highlight which requires adjustment, as a large

portion of these patients would have very specific requests with respect to the rectification of a specific actual component. Medical procedure to improve feel should be directed remembering its results in their entirety. [13]

Patients should be unmistakably clarified the speculative term of their recuperation, as this would help them in having practical desires and lessening their disappointment over the long haul since recuperation from facial injury is protracted and multidisciplinary. [9]

It should be perceived that expanded degrees of stress and deferred recuperation are predominant in patients with wounds to the vital territories of the face, for example, the eyes and ears. [15]

Stress-instigating life occasion before the event of injury and lifetime utilization of social administrations are indicators of PTSD. Financially burdened people going through careful administration of orofacial injury should go through mental evaluation and the executives of mental necessities, as this gathering has been found to show poor mental outcomes. [16]

Old females will in general report more significant levels of torment post-injury and females, by and large, are more worried about facial disfigurement post trauma. [17]

Patients with long-standing protests about appearance and steady disappointment with facial feel should be screened for body dysmorphic disorder. [18]

Seriously harmed patients will in general be additionally controlling in their requests from treatment and during the recuperation stage too. Feeling centered methodologies for adapting are more acceptable for patients as far as their facial appearance. [19]

After introductory appraisal of damaged patients is finished with, these patients should be clarified obviously their current condition alongside the proposed treatment plan. The family should likewise be associated with at this stage and practical desires from treatment should be developed.

The treatment plan should be clarified unequivocally and completely with respect to postoperative disfigurement, torment, number of

medical procedures, time span, and expected careful horribleness, for example, torment, paresthesia, and expanding.

Aside from this, the treating specialist should build up a compassionate disposition toward the patient and apportion sufficient chance to quietly tune in to the patient and his/her family's interests and answer them in a consoling way and yet staying honest about the recuperation and dismalness anticipated.

Notwithstanding these methodologies, a mental arrangement can likewise be set up for the patient to relieve any further worries that the person in question may have. Likewise, the spread of psycho-instructive material tending to treatment results and adapting techniques may end up being of benefit to the training all in all.

### RESULTS:

The aftereffects of this writing audit unmistakably highlight an expanded predominance of mental state issues in patients experiencing facial injury. Furthermore, mental appraisal apparatuses end up being valuable methods in the screening of such patients and in perceiving basic mental issues. It is likewise very obvious that early mental mediation influences the guess of patients in the long haul.

What follows are sure suggestions from the creator to help set up an essential administration convention for patients who may potentially be experiencing or might be inclined to mental issues relating to obtained facial injury. Starting appraisal of patients to screen for mental issues should be led by using an organized methodology, for example, that of mental evaluation instruments. Many of these apparatuses are self-evaluation and are not psychologically requesting which would give the patient simplicity of noting the things. Likewise, the underlying mental evaluation can be led by nonmedical work force as well. [4]

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Patients with cracks of the mandible have been appeared to go through sadness, expanded degrees of tension, and distress<sup>12</sup> and, henceforth, such patients should be screened and guided properly.

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After starting appraisal of damaged patients is finished with, these patients should be clarified plainly their current condition alongside the proposed treatment plan. The family should likewise be associated with at this stage and practical desires from treatment should be developed.

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Notwithstanding these systems, a mental arrangement can likewise be set up for the patient to relieve any further worries that the person in question may have. Likewise, the scattering of psycho-instructive material tending to treatment results and adapting methodologies may end up being of benefit to the training by and large

### CONCLUSION:

The results of this literature review clearly point toward an increased prevalence of mental state disorders in patients suffering from facial trauma. In addition, psychological assessment tools have been proved to be useful means in the screening of such patients and in recognizing underlying psychological issues. It is also quite evident that early psychological intervention affects the prognosis of patients in the long term.

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