

Medical Science

To Cite:

Górski J, Górka M, Janowski M, Czyż P, Strzałkowska A.
Psychological Impact of Facial Scarring in Maxillofacial Trauma
Patients: A Systematic Review. *Medical Science* 2025; 29: e146ms3697
doi: <https://doi.org/10.54905/disssi.v29i162.e146ms3697>

Authors' Affiliation:

¹Medical University of Lodz, Pomorska 251, 92-213, Lodz, Poland
²Central Teaching Hospital of Medical University of Lodz, Pomorska 251, 92-213, Lodz, Poland
³Szpital Miejski im. Św. Wincentego a Paulo w Gdyni, ul. Wójta Radtkego 18 Gdynia, Poland

*Corresponding author:

Jakub Górski, Medical University of Lodz, Pomorska 251, 92-213, Lodz, Poland; E-mail jakubgorski26@icloud.com

Peer-Review History

Received: 11 June 2025
Reviewed & Revised: 25/June/2025 to 14/August/2025
Accepted: 21 August 2025
Published: 27 August 2025

Contact List

Jakub Górski	jakubgorski26@icloud.com
Marta Górka	martagorska@onet.eu
Maciej Janowski	maciej.janowski96@gmail.com
Paweł Czyż	pawel.czyz98@gmail.com
Antonina Strzałkowska	antonina.strzalkowska99@gmail.com

ORCID List

Jakub Górski	0009-0006-7623-1181
Marta Górka	0009-0001-0798-5194
Maciej Janowski	0009-0003-5196-5945
Paweł Czyż	0009-0005-3351-1610
Antonina Strzałkowska	0009-0003-0075-0303

Peer-review Method

External peer-review was done through double-blind method.

Medical Science
pISSN 2321-7359; eISSN 2321-7367



© The Author(s) 2025. Open Access. This article is licensed under a [Creative Commons Attribution License 4.0 \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/), which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.

Psychological Impact of Facial Scarring in Maxillofacial Trauma Patients: A Systematic Review

Jakub Górski^{1*}, Marta Górka², Maciej Janowski², Paweł Czyż³, Antonina Strzałkowska²

ABSTRACT

The emotional toll of facial scars (particularly those left behind after mandibular or broader facial trauma) has often been brushed aside in clinical care or, at the very least, not fully acknowledged. Modern surgical techniques have advanced significantly, enhancing our ability to reconstruct facial structures, restore symmetry and muscle functionality. Many patients report that the scars are not only confined to the skin, but they also affect them emotionally and socially. They influence confidence, mental well-being, and daily social experiences. Impact scale depends mainly on location. It is especially harmful when scar is located proximate to the midline, situated across the orbital cavity and the lips. In this review, we set out to explore the emotional and psychological aftermath faced by people living with facial scarring due to trauma. Research focused on the last two decades of studies, which covered a range of topics (including anxiety, depression, post-traumatic stress, and concerns about body image). We also considered how factors like age, gender, and social norms around appearance can change perceiving of scars. Facial scarring may lead to severe psychological distress. Recent studies have indicated that certain groups of people appear to be more vulnerable to this phenomenon than others. It has been demonstrated that younger demographics, women, and individuals whom appearance is linked to their profession are more likely to experience such psychological distress. Unfortunately, studies' follow-up tends to be short, and the tools used to measure mental health outcomes are not always consistent.

Keywords: Scarring, Psychological Trauma, Maxillofacial Surgery

1. INTRODUCTION

Facial scars - especially those that come from mandibular or wider maxillofacial trauma are often so much more than just physical reminders or cosmetic issues. They represent a complex challenge that extends beyond the standard aims of clinical care. Reconstructive surgery has made enormous strides in restoring anatomy and function, but the psychological impact of these scars (which can linger long after the wounds heal) is frequently underestimated—or sometimes completely overlooked—in everyday clinical practice (Wilson et al., 2018; Walshaw

et al., 2022). It is particularly concerning because scars that show up on visible and central areas of the face (the jaws, cheeks, lips) can profoundly affect a person's self-esteem, mental health, and social interactions, often in ways that might not be immediately obvious to specialists and surgeons (Hoogewerf et al., 2014).

An anxiety, depression, and symptoms that resemble post-traumatic stress disorder (PTSD) tend to affect people who suffered facial trauma more often, compared to the general population (Wilson et al., 2018; Lal et al., 2024). For example, a prospective study carried out in the UK found that a striking 84% of patients with maxillofacial injuries showed signs of psychological distress right after their injury, and many of them were still dealing with these challenges even one month later (Wilson et al., 2018). Studies, which were conducted in other parts of the world came to similar conclusions, which confirms how common and persistent the emotional impact of facial scarring can be (Hoogewerf et al., 2014; Howson et al., 2021).

Severe and visible facial scars are mostly defects, which patients need to cope with eternally, but what truly matters is how the individual perceives and experiences their disfigurement. Younger people, women, and those whose jobs or daily lives put a lot of emphasis on appearance tend to be especially vulnerable to the emotional toll of facial scars (Walshaw et al., 2022; Sahni, 2018).

This review brings together what we know so far about the psychological impact of facial scarring after maxillofacial trauma. We want to highlight the key demographic and psychosocial factors that shape how patients recover, and to make a strong case for a multidisciplinary approach. It means bringing together surgical reconstruction with early psychological care, which provides physical and emotional healing. Comprehensive approach enables the reclaiming of patients' sense of well-being.

2. REVIEW METHODS

To better understand the emotional and psychological weight that facial scarring (particularly after mandibular or broader maxillofacial trauma) carries, we approached this topic with a narrative review—rather than a rigidly structured meta-analysis—because we wanted to explore not just data, but lived experience. This format allowed us to bring together a wide range of studies, examining their underlying implications.

Selection of a proper study strategy

We started by conducting a thorough search of the PubMed/MEDLINE database. We searched studies published from January 2000 to May 2025 using keywords like facial trauma, maxillofacial injury, psychological distress, depression, PTSD, scarring, and body image. The keywords were combined and filters were applied so that we only pulled in human-based, English-language research published in peer-reviewed journals was retrieved.

The article screening process adhered to the PRISMA guidelines (Figure 1). Our goal wasn't just to find the most complex studies, but the most relevant ones. So we also combed through the references in key papers to see if anything important might've slipped through the algorithmic cracks. We gave extra weight to documents that were frequently cited or referenced in other well-regarded reviews.

Inclusion and exclusion criteria

We included studies that looked at trauma-related facial scarring and its psychological effects—things like anxiety, depression, post-traumatic stress symptoms, or negative body image. These studies employed a range of validated mental health assessment tools, including the Hospital Anxiety and Depression Scale (HADS), the Impact of Event Scale-Revised (IES-R), or the Trauma Screening Questionnaire (TSQ).

We didn't include studies that focused on cosmetic procedures, congenital disabilities, burn injuries, or case reports. Our focus was squarely on trauma - on what happens emotionally after the kind of injuries that are usually sudden, often violent, and always life-changing.

Data Extraction

For each study, we looked at the design (was it a cross-sectional snapshot, or did it follow people over time), who was included (age, gender, country, cause of trauma), what kinds of scars or injuries were studied (visible vs non-visible, disfiguring vs not), and what tools they used to measure psychological impact. We focused on studies that examined the duration of these effects and whether any form of mental health support was provided.

A UK-based prospective study found that about 84% of maxillofacial trauma patients experienced psychological distress in the early stages after injury. However, the number dropped after a month; a substantial group still showed ongoing symptoms (Wilson et al., 2018).

In India, a study comparing disfiguring vs non-disfiguring injuries showed that patients with apparent facial damage experienced more severe anxiety and depression episodes, particularly young adults and women. And these effects didn't go away quickly - they stuck around at discharge, one month later, and even six months down the line (Kishore et al., 2020).

Broader studies from Australia and the UK confirmed that psychological effects of facial trauma cut across cultures and systems—people everywhere tend to feel anxious, isolated, or depressed after these kinds of injuries, even if they have access to high-quality surgical care (Hull et al., 2003).

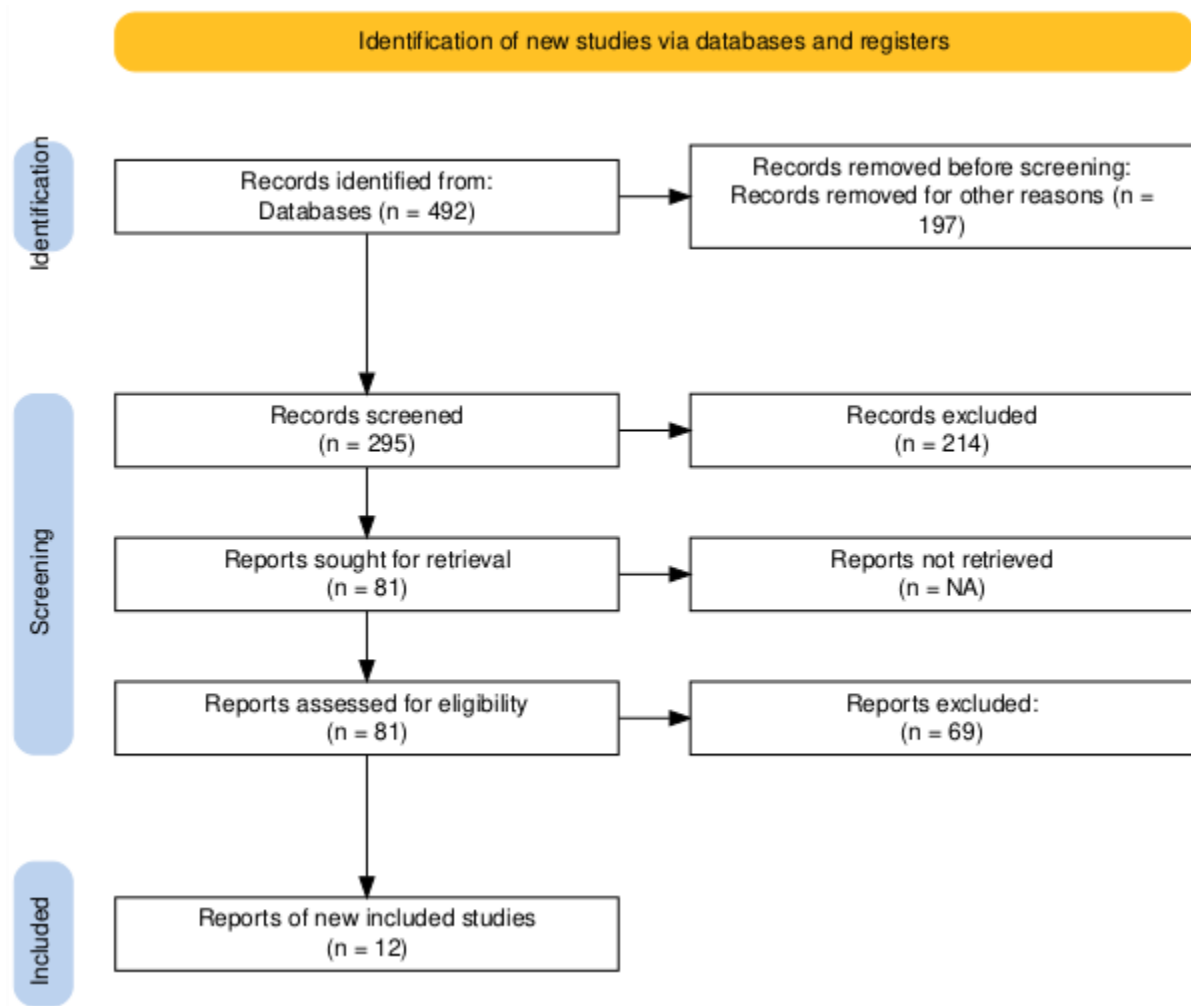


Figure 1 PRISMA flow diagram

Limitations of the study

Despite the strength of the evidence, many studies still come with significant limitations, which include short follow-ups, small sample sizes, or inconsistent use of mental health scales. And, very often, mental health care is an afterthought in facial trauma protocols. Despite the identification of distress, a limited number of patients seem to receive structured psychological support early on (Howson et al., 2021).

Significance of the method

This method—bringing together high-quality, validated, trauma-focused research—gives us a much clearer view of the emotional aftermath of facial scarring. It shows not only what happens psychologically but why it matters: because people aren't just healing from a broken jaw or cheekbone—they're also dealing with fear, grief, shame, and often, social withdrawal.

3. RESULTS AND DISCUSSION

Facial trauma treatment is focused on physical damage, which include structural and functional reconstruction. These elements undoubtedly hold significant importance. Nevertheless, the emotional impact of facial scars is frequently overlooked in treatment programme. These scars, especially when they are situated front and center on the face (around the lips, the cheeks, the jawline), carry a psychological weight that many patients struggle to articulate—and many care providers unintentionally overlook.

Several high-quality studies over the past few decades have demonstrated the pervasiveness of this distress. One extensive UK-based study found that up to 84% of people with maxillofacial injuries were experiencing notable psychological distress shortly after their injury. Even a month later, about one in four patients still hadn't returned to emotional baseline (Wilson et al., 2018). That's not a short-term reaction—it's a sign of lingering emotional trauma.

This phenomenon has been observed worldwide. In India, a different group of researchers made a similar observation concerning the phenomenon. Patients with disfiguring facial injuries (especially younger adults and women) had significantly higher levels of anxiety and depression than those with less visible injuries, and this distress didn't just fade after discharge. It persisted at the one-month and six-month marks (Gandjalikhan-Nassab et al., 2016).

Even further, a study from Nigeria comparing individuals with facial injuries to orthopedic trauma patients found that those with facial injuries experienced a more significant drop in self-esteem, suggesting that facial disfigurement may have a uniquely personal and identity-threatening quality (Braimah et al., 2019). These emotional consequences aren't abstract or rare; they are persistent, measurable, and common.

In a different comparative analysis, people who had suffered facial trauma scored much lower in terms of general life satisfaction and body image. They were more likely to avoid social interactions, feeling embarrassed. For women in particular—and especially younger women—these emotional challenges may be magnified. Many studies consistently report higher distress levels in women following maxillofacial trauma, likely due to sociocultural pressures around beauty and appearance (Sahni, 2018). People whose jobs depend heavily on how they look (e.g. models, performers, or anyone in a public-facing role) also tends to experience intense distress, even if, the injury might seem minor or insignificant to outside observer. Table 1 provides a comparison of the groups especially affected by facial injuries.

The integration of mental health services into facial trauma care remains unsatisfactory, in spite of research growth in this field. Psychological screening tools such as the Hospital Anxiety and Depression Scale (HADS) or the Trauma Screening Questionnaire (TSQ) are typically not standardized across medical centers. Furthermore, psychological follow-up often ends just a few weeks post-discharge, missing the window where long-term support could make the most difference (Howson et al., 2021).

There are some promising exceptions. A few trauma centers have begun incorporating routine mental health screenings and referral pathways for patients with facial injuries. Early evidence suggests that when mental health professionals are involved early on, patients experience better long-term adjustment, fewer complications with social reintegration, and even improved surgical satisfaction (Choi et al., 2020).

Awareness about the mental health impact of facial trauma has grown. However, most care still tends to react only after someone clearly shows emotional distress. Many of these feelings – anxiety, sadness, frustration – are kept inside. They are hidden behind coping strategies, shame, or cultural silence. It is not just helpful; it is vital to provide psychological support early on.

The research itself has apparent limitations. A considerable number of studies have been conducted with limited sample sizes or have only monitored patients over brief periods, which hinders comprehension of the prolonged process of emotional recovery. Factors such as culture, gender, and personal background play a key role on the recovery process. This approach is pivotal in terms of offering care that fits each person's unique experience.

We need longer-term studies that include diverse populations and culturally sensitive tools for screening and support. Mental health care ought to be integrated into the treatment process from the outset, which is linked to the need of close collaboration between surgeons, psychologists, and social workers.

Table 1. Groups vulnerable to Psychological Distress following Facial Trauma

Groups	Findings
Women	- Higher distress compared to men - Sociocultural pressures related to beauty
Younger Adults	- Experience more severe episodes of anxiety and depression - Persistent psychological distress at 1 and 6 months post-injury
Appearance-related professionals (e.g. models, actors, etc.)	- Minor injuries tend to cause a significant emotional impact
Patients with disfiguring injuries	- Greater distress compared to patients with less visible injuries - More severe anxiety and depression episodes
Patient in Low-Resource Settings	- Limited access to mental health services cause additional psychosocial barriers - Cultural stigmatization

4. CONCLUSION

The emotional impact of facial trauma (especially the visible scarring) is a frequently under-researched area. It is essential to understand that the distress caused by a scar is not always due to size and general appearance; more frequently, the focus is on the patient's subjective interpretation of the experience and its significance. Two individuals with similar scars can handle the situation in different ways. The process of healing (or struggling) is intricately linked to personal experience, cultural background, and the social circles patients live in.

Mental healthcare in trauma treatment still isn't consistent or thorough enough. Unfortunately, when mental health support is available, it often lacks the continuity required to reach individuals during their most challenging times. We need longer studies that include people from all sorts of backgrounds. Mental health tools should respect and adapt to different cultures and life experiences. Mental healthcare must be a core part of the treatment journey from the outset. Surgeons, psychologists and social workers should collaborate to support patient holistically.

Acknowledgments

The authors have no acknowledgments to disclose.

List of Abbreviations

PTSD – Post-Traumatic Stress Disorder

HADS – Hospital Anxiety and Depression Scale

IES-R – Impact of Event Scale – Revised

TSQ – Trauma Screening Questionnaire

Author's Contribution

Project management, literature selection – Jakub Górski, Paweł Czyż

Conclusions and recommendations – Marta Górską, Maciej Janowski, Jakub Górski

Writing – Jakub Górski, Antonina Strzałkowska

Synthesis of results – Maciej Janowski, Paweł Czyż, Marta Górską

Language correction – Antonina Strzałkowska, Paweł Czyż

Data analysis – Jakub Górski

All authors contributed in the preparation of the final manuscript.

Informed consent

Not applicable.

Ethical approval

Not applicable.

Funding

This study has not received any external funding.

Conflict of interest

The authors declare that there is no conflict of interest.

Data and materials availability

All data associated with this work are present in the paper.

REFERENCES

1. Braimah RO, Ukpong DI, Ndukwe KC, Akinyoola L. Self-esteem following maxillofacial and orthopedic injuries: preliminary observations in sub-Saharan Africans. *Oral Maxillofac Surg* 2019;23(1):71–6. doi: 10.1007/s10006-018-0735-5
2. Choi J, Lorenz HP, Spain DA. Review of facial trauma management. *J Trauma Acute Care Surg* 2020;88(4):e124–30. doi: 10.1097/TA.0000000000002589
3. Gandjalikhan-Nassab SH, Samieirad S, Vakil-Zadeh M, Habib-Aghahi R, Alsadat-Hashemipour M. Depression and anxiety disorders in a sample of facial trauma: A study from Iran. *Med Oral Patol Oral Cirurgia Bucal* 2016;21(4):e477–482. doi: 10.4317/medoral.21068
4. Hoogewerf CJ, van Baar ME, Middelkoop E, van Loey NE. Patient reported facial scar assessment: directions for the professional. *Burns J Int Soc Burn Inj* 2014;40(2):347–53. doi: 10.1016/j.burns.2013.07.015
5. Howson K, Yeung E, Rayner L, Fan K. Real-time screening tool for identifying post-traumatic stress disorder in facial trauma patients in a UK maxillofacial trauma clinic. *Int J Oral Maxillofac Surg* 2021;50(11):1464–70. doi: 10.1016/j.ijom.2021.01.022
6. Hull AM, Lowe T, Devlin M, Finlay P, Koppel D, Stewart AM. Psychological consequences of maxillofacial trauma: a preliminary study. *Br J Oral Maxillofac Surg* 2003;41(5):317–22. doi: 10.1016/S0266-4356(03)00131-1
7. Kishore J, Vatsa R, Singh J, Kumari M, Kumar T, Bandgar S. Psychological Impact on Maxillofacial Trauma Patients – An Observational Study. *J Med Life* 2020;13(4):458–62. doi: 10.25122/jml-2020-0111
8. Lal B, Ganesh K, Alagarsamy R, Gupta S, Kumar M, Barathi A. Post-traumatic stress disorder in maxillofacial trauma victims- A systematic review and meta-analysis. *J Stomatol Oral Maxillofac Surg* 2024;125(12 Suppl 2):101993. doi: 10.1016/j.jormas.2024.101993
9. Sahni V. Psychological Impact of Facial Trauma. *Craniomaxillofacial Trauma Reconstr* 2018;11(1):15–20. doi: 10.1055/s-0037-1603464
10. Walshaw EG, Taylor R, Anderson J, Sexton P, Parmar JD, Carter LM. The psychological sequelae of maxillofacial trauma: a scoping review of the literature. *Br J Oral Maxillofac Surg* 2022;60(10):1303–20. doi: 10.1016/j.bjoms.2022.09.013
11. Wilson N, Heke S, Holmes S, Dain V, Priebe S, Bridle C. Prevalence and predictive factors of psychological morbidity following facial injury: a prospective study of patients attending a maxillofacial outpatient clinic within a major UK city. *Dialogues Clin Neurosci* 2018;20(4):327–39. doi: 10.31887/DCNS.2018.20.4/sheke