



## The Impact Of Psychological Factors On Prosthodontics Treatment Outcomes: A Review

<sup>1</sup>Dr. B. Eswaran ,<sup>2</sup>Dr.Nithish Kumar

Dr. MGR Educational and research institute

### ABSTRACT :

The focus of prosthodontics is on restoring and replacing missing teeth, but the technical aspects don't always determine the outcome. Treatment is influenced by various psychological factors, such as patient expectations, self-esteem, body image, anxiety, and coping mechanisms. According to research, patients who wear fixed prostheses tend to have a better quality of life and higher self-assurance than those who don't require dentures. The relationship with the dentist, psychological readiness, and motivation play a significant role in determining treatment adherence and satisfaction. Cognitive profiling based on psychological profiles allows for better patient co-operation and compliance with treatment interventions. The improvement of prosthodontic results can be aided by addressing psychological issues, particularly among elderly patients who are anxious. Treatment success is dependent on effective communication, realistic expectations and emotional support. By recognizing and managing psychosocial factors, prosthodontia can enhance patient satisfaction over time and improve patient experiences.

**Keywords:** Prosthodontics, Psychological Factors, Patient Satisfaction, , Self-Esteem, Patient Compliance, Geriatric Patients, Communication.

### Introduction :

Prosthodontic expertise includes all-encompassing procedures for the restoration and replacement of missing teeth and their corresponding structures, including single crowns, full dentures, and implants. Despite the importance of clinical factors like the accuracy of dental procedures, material selection, and technical expertise, psychological factors also have an impact on treatment outcomes<sup>1</sup>. The psychological factors influence how patients perceive their treatment outcomes, what they expect, and how they follow postoperative care instructions. Physiology is similar but different. A patient's self-esteem, quality of life, and overall satisfaction with treatment are significantly impacted by psychological factors.<sup>2</sup> Technical procedures, functional capabilities, esthetics, biological factors and psychological factors are all important in the success of denture prostheses. What is the best answer? Patient readiness for treatment, mental attitude towards dentures, dental experience and relationship, learning to use denture, and personality are all psychological factors that can influence outcome<sup>3</sup>. Prosthodontists must consider the psychological makeup of their patients to improve their acceptance of treatments. The external appearance of an individual's true self is often referred to as personality, which can either be welcoming or discouraging. De Van suggests that the key is to consider the patient's mind before treating them, as they need to be able to comprehend their thoughts before starting treatment. According to research, the psychological effects of different prostheses can vary and while fixed ones may be more effective than removable ones, people generally feel better about their emotional and functional function<sup>4</sup>. The focus of this article is on the psychological factors that impact the success of orthodontic procedures.

### Review of Literature :

Studies have shown that psychological factors play a significant role in the self-esteem and quality of life of patients undergoing prosthodontic treatment. For instance, patients with fixed prostheses reported higher self-esteem scores (28.5) compared to those with removable prostheses, who had lower scores (26.8) (Gosavi et al., 2024). Additionally, assessments of quality of life indicated that users of fixed prostheses had lower Oral Health Impact Profile scores (15.2) than those using removable dentures (18.7), suggesting a better overall impact on daily living for fixed prosthesis users (Gosavi et al., 2024).<sup>5</sup> Despite these positive outcomes, many patients face adaptation challenges when using removable dentures, with approximately 20-26% struggling to adjust due to psychological discomfort and the perception of dentures as foreign objects (Mghebrishvili et al., 2023). Successful adaptation to these prostheses is often tied to the patient's motivation and psychological readiness to embrace the new prosthetic solution (Mghebrishvili et al., 2023).<sup>6</sup> The psychological impact of prosthodontic rehabilitation is also evident in patients who undergo major surgeries, such as maxillectomies. These patients experience notable reductions in anxiety and depression following prosthodontic rehabilitation, underscoring the importance of addressing psychological distress in the treatment planning process (Gupta & Raj, 2023).<sup>7</sup> Furthermore, psychological therapies have been shown to enhance treatment outcomes in conditions like temporomandibular disorders, suggesting that addressing mental health concerns can improve the overall efficacy of prosthodontic treatments (Kinkulkina et al., 2023).<sup>8</sup> While psychological factors undeniably influence the success of prosthodontic treatments, some researchers argue that clinical outcomes should primarily focus on the technical aspects of prosthodontics, potentially overlooking the emotional dimensions that play a

critical role in patient satisfaction and quality of life (Leles et al., 2022). This perspective highlights a gap in the holistic approach to dental care, where technical success may not always align with the emotional and psychological well-being of patients.<sup>9</sup>

### Psychological Classifications of Prosthodontic Patients

Patient satisfaction and treatment outcomes in prosthodontics are significantly influenced by their psychological profiles and relationship with the dentist. Dr. M. M. House classified patients into four categories based on their psychological responses to treatment. The "Philosophical" patient is cooperative, trusts the dentist's advice, and willingly accepts dentures. The "Exacting" patient is often in poor health, requires extensive treatment, but is skeptical of the dentist's ability to meet their expectations, demanding extraordinary guarantees. The "Hysterical" patient is fearful and resistant to dentures, often failing to adapt to them due to unrealistic expectations of their function and appearance. Lastly, the "Indifferent" patient is not motivated by self-image or the benefits of dentures and has managed without them.<sup>10</sup> Following House's framework, O'Shea et al. and Winkler described the ideal dental patient as compliant, sophisticated, and responsive, recognizing the need for treatment and successfully using the prosthesis. Other classifications, such as TOLBUDS, TOLAD, and TOLN, categorize patients based on their tolerance for adjustments to prostheses, while Blum's classification divides patients into "Reasonable" and "Unreasonable" categories. Alex Koper's concept of the "Difficult Denture Bird" describes patients who are unhappy, anxious, and hostile, transferring fears and frustrations onto the dentist.<sup>11</sup> A refined version of House's classification by Simon Gamer and colleagues emphasizes that both the patient's and dentist's psychology influence treatment outcomes. This updated classification includes categories such as the "Ideal Patient," who is motivated and cooperative, the "Submitter Patient," who lacks critical thinking and cannot provide informed consent, the "Reluctant Patient," who distrusts the treatment plan, and the "Resistant Patient," who challenges the dentist but lacks trust. Understanding these psychological profiles can help prosthodontists tailor treatment approaches to enhance patient satisfaction and treatment success.<sup>12,13</sup>

### Psychological Factors Influencing Prosthodontic Treatment Compliance and Patient Satisfaction

The success of prosthodontic treatments is heavily dependent on patient compliance, which can be significantly impacted by psychological factors such as fear, anxiety, and a lack of understanding of the treatment process. Patients may delay appointments or fail to follow care instructions due to these psychological barriers. However, building a trusting relationship between the patient and the dentist, providing clear and realistic expectations, and effectively managing anxiety can greatly improve treatment compliance and enhance the likelihood of successful outcomes.<sup>14</sup> Beyond the technical success of the restoration, patient satisfaction is also deeply influenced by psychological well-being, including improvements in self-esteem, reduced anxiety, and satisfaction with aesthetic outcomes. Addressing these psychological aspects through interventions like counseling or cognitive-behavioral techniques can improve the long-term success of prosthodontic treatments. Effective communication plays a crucial role in managing these psychological factors; open and clear discussions about the treatment process, actively addressing patient concerns, and setting realistic goals can significantly reduce anxiety and foster positive treatment experiences. Empathy and active listening are key to ensuring that patients feel heard, supported, and confident in their treatment journey, ultimately contributing to better overall satisfaction and treatment success.<sup>15,16</sup>

Psychological Factor	Description	Impact on Treatment
Patient Expectations	Unrealistic expectations influenced by media, cosmetic dentistry advertisements, or prior experiences.	Unrealistic expectations can lead to disappointment, even with technically successful outcomes. Realistic expectations improve satisfaction and adherence to treatment protocols.
Body Image and Self-esteem	The impact of missing teeth on self-image and the motivation for prosthodontic care to restore function and aesthetics.	Psychological distress due to poor body image can affect motivation, perception of treatment, and satisfaction. Improved self-esteem is often reported post-treatment.
Anxiety and Fear	Dental anxiety regarding procedures, pain, and long-term outcomes.	Anxiety can negatively affect treatment acceptance, compliance, and progress. Addressing anxiety through communication, reassurance, and sedation can improve treatment outcomes.
Coping Strategies and Personality	Patients' coping strategies and personality traits influence treatment satisfaction.	Positive, proactive coping strategies tend to improve outcomes, while negative coping mechanisms may result in complications. Traits like neuroticism may correlate with lower satisfaction.
Psychological Disorders	Conditions such as depression, anxiety disorders, and personality disorders.	Psychological disorders can reduce motivation for treatment, affect adherence to care instructions, and lead to dissatisfaction. Identifying and managing these conditions improves outcomes.

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### **Challenges in Treating Geriatric Patients in Prosthodontics :**

Treating geriatric patients in prosthodontics presents unique challenges, particularly in communication and managing age-related cognitive and sensory changes. While "fluid" intelligence tends to decrease with age, "crystallized" intelligence often remains stable or even increases, suggesting that prosthodontic management can be more effective when building upon existing knowledge and habits. The relationship between the prosthodontist and patient is crucial, as effective communication influences treatment success. Verbal communication should be positive, focusing on reassuring the patient about comfort rather than emphasizing potential discomfort.<sup>16</sup> Using layman's language instead of technical dental jargon helps avoid misunderstandings and maintains trust. Non-verbal communication also plays a significant role, with factors like the clinical environment, furniture arrangement, and lighting influencing patient comfort. Proxemics, or the use of personal space, is essential to consider, as treatment often requires the prosthodontist to enter the patient's intimate space, which must be done carefully to ensure psychological comfort.<sup>17</sup> Touch, a critical aspect of communication, should be used sensitively to avoid increasing patient anxiety. Additionally, physical behaviors such as hand gestures and eye contact can provide valuable insights into a patient's emotional state, aiding in psychological assessment and treatment adjustments. Overall, understanding and addressing these psychosocial factors are key to providing effective and compassionate care for geriatric prosthodontic patients.<sup>18</sup>

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### **Psychological Aspects in Prosthodontics Treatment :**

Psychological factors play a significant role in prosthodontics, particularly in managing conditions like gag reflex, maxillofacial rehabilitation, temporomandibular joint (TMJ) disorders, aesthetic dentistry, and implant dentistry. Gagging can have somatogenic or psychogenic causes, and managing it often involves techniques like relaxation, distraction, systematic desensitization, and errorless learning to gradually reduce sensitivity. Psychological considerations in maxillofacial rehabilitation emphasize the importance of restoring confidence and dignity, especially in cancer patients or those with severe facial deformities, helping them cope with social stigma and emotional trauma. In TMJ disorder patients, emotional stress often exacerbates pain and muscle tension, highlighting the need for psychological evaluation and integrated treatment approaches. Aesthetic dentistry, particularly in smile restoration, requires a deep understanding of the patient's psychological state, motivations, and self-esteem. In implant dentistry, psychological considerations are crucial as aging patients may have difficulty adapting to removable dentures, and implant therapy offers both functional and emotional benefits, improving self-confidence and quality of life. Psychological evaluation of the patient, including body type and interpersonal cues such as handshake firmness, can help tailor treatment and ensure better outcomes. Effective communication, addressing emotional concerns, and fostering patient comfort are key to successful prosthodontic care.<sup>19,20</sup>

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### **Psychosomatic Factors in Prosthodontics Treatment :**

Psychosomatic disorders, where emotional states influence physiological symptoms, significantly impact prosthodontic treatment. The link between the mind and body is evident in circulatory disturbances, respiratory issues, and gastrointestinal disorders, which can complicate treatment outcomes. Circulatory issues such as hypertension and poor circulation can affect denture function, causing ulcers and discomfort due to reduced resistance in the mucous membranes. Respiratory disorders, including asthma and shortness of breath, are common in psychosomatic patients, and dental procedures like impressions can trigger gagging or breathing difficulties, requiring sensitive management to maintain patient comfort. Gastrointestinal issues, often linked to poor oral hygiene in depressed patients, exacerbate dental problems by promoting bacterial growth. Psychological factors can also lead to detrimental habits like nail-biting, tooth-clenching, or grinding, which affect oral health and mucosal tissues. Additionally, unhealthy dietary habits, often exacerbated by emotional distress, can impact the condition of the mucosa and alveolar bone. Psychosomatic symptoms are categorized by abnormal physical changes, environmental stressors, or classical and operant conditioning, with treatments such as relaxation, cognitive restructuring, and desensitization helping to alleviate stress-related dental issues. These psychosomatic conditions require comprehensive care that addresses both the emotional and physical aspects to ensure successful prosthodontic outcomes.<sup>21,22</sup>

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### **Conclusion :**

Psychological factors play a significant role in determining the outcomes of prosthodontic treatments. Factors such as patient expectations, body image, anxiety, and mental health status influence treatment compliance, satisfaction, and overall success. Addressing these psychological elements through effective communication, managing anxiety, and setting realistic expectations can significantly enhance the outcome of prosthodontic treatments. As the field evolves, the integration of psychological support into prosthodontic care becomes increasingly important, highlighting the need for a holistic approach to patient care that considers both the physical and psychological aspects of treatment.