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ORIGINAL ARTICLE

# Patient Satisfaction in Prosthodontic Treatment: Multidimensional Paradigm

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**Abstract** A number of different factors contribute to an efficient clinical outcome in prosthetic dentistry. Differences between patient's and prosthodontist's perception of treatment display great variability. Patient satisfaction in prosthetic dentistry is a multidimensional concept as is patient's perception of dental care. Patient satisfaction can be assessed if it is carefully defined. In the prosthodontic treatment context patient satisfaction can be expected to interact with the patient's entire life situation. This article highlights the issues that reflect the different dimensions of patient satisfaction in prosthodontic care.

**Keywords** Patient satisfaction · Communication skills · Technical quality · Patient anxiety

## Introduction

De Van [1] stated it well when he said we should meet the mind of the patient before we meet the mouth of the patient. Accurate diagnosis and a strict treatment protocol have proven to predict good long term survival rates for prosthodontics. Even if the prosthetic treatment is of excellent clinical quality, some patients will still be dissatisfied. Patient satisfaction with prosthetic dentistry seems to have a multicausal character [2].

Concern about the doctor patient relationship was documented as far back as Hippocrates. Major impetus for investigation of patient satisfaction with health care was the quality assurance movement of the 1970's. More recent influence in research into patient satisfaction has been the shift in health care from the sellers to a buyers market—internal marketing [3]. A shift of the public from 'industry driven societal structures' to 'informational driven societal structures' makes patients the primary catalyst for change [4].

Prosthodontists must fully understand their patients, because such understanding predisposes patients to accept the kind of treatment they need [5]. In prosthodontics esthetic issues–what is possible versus what is advisable—are common and often of major importance, making consideration of patient desire and anticipation necessary to achieve a satisfactory treatment result [6]. Gender, age and education level have an effect on satisfaction and received previous dental treatments on anterior teeth and desired treatments for improvement of esthetics [7]. Patient satisfaction in prosthetic dentistry is a multidimensional concept as is patient's perception of dental care [8].

## Dentist Patient Relationship

Szasz and Hollender [9] suggest that there are three types of relationship between patients and health professionals.

- The active passive relationship where the dentist assumes responsibility for the passive patient. An example is a patient at (rather than to) whom the dentist constantly talks, telling them what to do, allowing no opportunity for reply. Dentist has all the knowledge whilst the patient has nothing worthwhile to contribute.
- The guidance co-operation relationship in which the dentist offers advice to the patient whose role is to comply with the advice given.

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- The mutual participation relationship where the dentist and patient share a partnership. The patient's thoughts, ideas, beliefs and experiences are considered to be just as important in the relationship as the knowledge and expertise of the dentist.

These different types of relationship are both necessary and appropriate in the dental setting and may all be used. However, it is shown that low compliance tends to be associated with health care professionals who do not seek a patient's active participation. If patients are to follow the advice they are given, it is essential to use the mutual participation model [10].

## Quality of Advanced Prosthetic Dentistry

Prosthetic rehabilitation is an important part of patient's quality of life. The level of reintegration is directly related to the degree of satisfaction with rehabilitation [11]. The importance of high technical quality as a corner stone of prosthetic dentistry is underlined when quality of life [12] and patient satisfaction are in focus. In most suggested evaluation instruments technical competence is regarded as crucial from the patient's perspective. The largest predictor of anxiety was the patient's perception of dentists' technical competence [13]. Abrams et al. [14] concluded that "simply practicing dentistry with a high degree of technical expertise will not necessarily convince the patient that he has received high quality dental care. Other less technical aspects are barometers of quality dental treatment. Practitioners should not lose sight of the human and psychotical aspects of care, and keep in mind that they are integral components of quality in dental treatment". Put simply, care cannot be of high quality unless the patient is satisfied. Since quality care addresses total clinical and psychological aspects of patient's satisfaction every effort towards good quality dentistry and quality assurance needs to involve patient satisfaction and perceptions as important measures [4].

## Interpersonal Communication

In the field of dentistry, knowledge and technical skills are not the only prerequisites for good practice. An ability to communicate effectively with patients—in particular, to use active listening skills, to gather and impart information effectively, to handle patient's emotions sensitively, and to demonstrate empathy, rapport, ethical awareness, and professionalism—is crucial [15]. Interpersonal communication is the process of sending, receiving, and interpreting information through verbal and nonverbal channels between people. Good communication is the basis of effective patient care and management [16]. Cross sectional studies [17–20] have reported that effective interpersonal communication in dentistry increases patient satisfaction and patient compliance at the same time reduces patient anxiety and the risk of malpractice claims. A stepwise multiple regression analysis indicated that the dentist's empathy and communicativeness were among important correlates of patient satisfaction. There are at least three purposes of patient-provider communication in dentistry:

(1) Creating a good interpersonal relationship. Words are the basis of the communicative processes, and communication is said to be necessary to achieve a satisfactory dentist patient relationship. Corah et al. [18] formulated a model of the dentist–patient relationship stating that satisfaction with a dentist can facilitate stress reduction, and stress reduction in turn promotes satisfaction.
(2) Exchanging information. Dentists need information from patients to find differences in expectations and preferences for the type of relationship the two are about to enter. These differences, if they remain, can negatively affect outcome. Patients need to understand and to be understood.
(3) Making treatment-related decisions. To reach a mutual understanding of the nature of the problem and its solutions, dynamic communication during dental visits should take place. The drift toward shared decision making is meant to improve outcomes like satisfaction, cooperation, and compliance [21].

Communication isn't so much about what is said but how what is said is heard. Communication comprises of verbal and non verbal aspects. There are three main elements of communication: words, tone of voice, and body language [22]. Mehrabian's and Argyle's model [10] suggest that communication is made up of three parts: 7% the actual words that convey information; 38% tone, conveying emotions and attitudes; and 55% non verbal communication or body language, which also conveys emotions and attitudes.

### Verbal Communication

Seven dimensions of verbal communication found to summarize the variational pattern of verbal interaction in prosthetic dentistry [23]:

- Emotional exchange, describing both supportive and non supportive, negative emotional exchange between dentists and patients.

- Information exchange–patient horizon describing mainly task focused informational exchange.
- Relation building exchange describing a verbal relation–building strategy comprising greetings, friendly statements and small talk.
- Information exchange–dentist horizon describing dentist's information gathering strategy as well as dentists' verbal behaviours favouring the proceedings of the encounter.
- Administrative and counseling exchange describing dentists' and patients' information gathering behavior about administration, clinical routines and paperwork.
- Task focused exchange describing mainly patient information giving behaviours and dentist back channeling behaviours.
- Socio emotional exchange describing mainly emotional communication but also dentist patient information seeking behaviours in the form of closed questions.

### Nonverbal Communication

Nonverbal behaviour modify the meaning of the verbal utterances—tone of voice, gaze, posture, hesitations, laughter, facial expression, proximity, dress and appearance. Non verbal communication could have an impact on patient satisfaction in the sense that if dentist is very good at reading the patient's body language and understanding what the patient is feeling the patient might feel less anxious and more trustful after this manner of communication [6].

### Anxiety and Communication

For patients with profound dental anxiety, it may necessitate meeting them away from the dental environment for the assessment visit. Domiciliary visits can be used as a good effect in this situation [22].

## Interpersonal Factor

Dentists do an excellent job of helping patients understand the potential treatment but there is another important factor in how the patients make the final decisions—interpersonal factor. Each time the patient says 'Yes' to an unfamiliar treatment it is essentially a leap of faith based on the level of trust they have in the practice [24]. Strong interpersonal skills are often the necessary ingredient for patient's development of trust in the prosthodontist, compliance with homecare recommendations, and consent to treatment recommendations. Steps that should be followed:

(1) Greet every person by name. People love to be acknowledged by name. When patients are addressed by their first name, they believe the dentist is interested in them. If a patient is older than the prosthodontist, always use his or her last name with the appropriate honorific (Mr., Ms., Dr.). If these older patients are comfortable with the prosthodontist, many will ask the dentist to use their first name.
(2) Never interrupt. Interrupting is a negative behavior. When a patient is interrupted, he or she often feels that the prosthodontist does not value what was said. When patients feel that the prosthodontist is listening to them and taking time to answer their questions, treatment acceptance increases.
(3) Smile. Smiling is an important way for the prosthodontist to let patients know that he/she is happy to see them and appreciates them. Many dentists rarely smile during working hours. They become so focused on the dentistry and the schedule that they rarely relax enough to smile. The best time to smile is when first greeting the patient [25].

## Behavioural Modification

### Adherence

Most dentists know to treat patients but not all dentists are successful in ensuring patient cooperation. Adherence and the patient's trust of satisfaction are intimately related. The style of the dentist-friendly rather than business like, collaborative rather than authoritative, non blaming, non criticizing, empathy and recognition of the potential difficulties that patients experience with the advice given have a major impact on the adherence and subsequent treatment outcome—'Biobehavioural' clinician role [26].

### Trust

Factors related to patient satisfaction such as experiences, sense of shared values, mutual understanding, caring attitude and good communication skills are strongly related to patient trust. Misleading patients or unrealistically raising their expectations through exaggerated promises, abusing their trust in anyway compromises ethical value of care [27]. The following chart offers practical guidelines on developing a nonverbal presence that builds trust Table 1 [28].

### Attitude

They are only one determinant of behaviour and are not always predictive. An attitude is made up of three parts: cognitive, emotional, behavioural. An example to clarify

**Table 1** Non verbal ways to build patient confidence

| What to try | What to avoid |
|---|---|
| Speaking with energy and appropriate emphasis | Speaking in monotone; too softly; tired; using verbal filters such as "um" or "you know" |
| Making direct and consistent eye contact | Looking away or down as you speak; looking only at the patient chart |
| Smiling as you speak; variety in facial expressions | Having little change in facial expressions; allowing negative reactions to show |
| Good posture | Slouching |
| Leaning forward in your chair | Leaning back in your chair |
| Making gestures that complement your message | Fidgeting, shuffling papers |
| Holding an open upper body position | Folding your arms |

this. An individual may say 'I believe (cognitive) it is important to go to the dentist every 6 months but I am very scared (emotional) of the dentist so I don't go (behavioural). Taking time to elicit the patient's attitude can save hours of frustration at a later date [10].

Dentist's attitude towards factors that influence patient treatment have been studied in number of papers [29–33]. An attitudinal controversy related to prosthodontics is the importance of loss of teeth to the health of the masticatory system. An example is the correlation between limited masticatory efficiency, restricted masticatory performance, and decreased patient satisfaction with a declining number of posterior teeth [34]. Differing attitudes of the dentist's have lead to different treatment philosophies and delegation of dentist's traditional tasks to dental assistants and dental hygienists. Dentists with a high production of prosthodontic treatments have a less positive attitude towards delegation and to patient information than dentists with a low prosthodontic production [35].

### Reassurance

The most common verbal technique used by persons attempting to deal with the problems of others is the type of reassurance in which problems are simply brushed aside as if they did not exist, and patients are told "just forget it". Reassurance, to be effective, must be an internal process. If patients have enough facts and knowledge at their disposal, they feel assured. They will derive reassurance by the well planned educational process that their dentists use with them [5].

### Transference

Every dentist will encounter patients who appear to have more problems than he is willing or able to handle as a part of his dental practice. If dentists encourage ventilation of such problems and probe too deeply with a problem solving approach, they may find themselves confronted with serious emotional problems relating to transference [5].

## Informed Consent

Rather than signing a form, quality information for patients and informed consent need to be considered as integral elements of a treatment alliance, a fair dialogue, quality oral care and a sign of respect for patients right for self determination [36]. Patient should therefore receive complete information and be made fully aware of the risk of treatment failure, as well as possible complications, limits to the procedures, and the fact that successful outcome will also depend on her/his scrupulous observance of the practitioner's instructions. In short, the aim is to make the patient an active "accomplice" in treatment. To this end, the use of an extremely detailed information leaflet is strongly advised; after careful clarification of any doubts the patient may have, the patient's written informed consent should be obtained. Nevertheless, there is the risk that excessive intrusion of bureaucracy into medical procedures in defence of the practitioner against malpractice suits may hinder the principal aim of traditional medicine, i.e. to provide the best care for the patient through mutual trust fostered within the doctor–patient relationship [37]. Table 2 Core principles of provision of professional information for patients [36].

## Convenience

Convenience factors do not appear to carry as much weight with patients as communication factors [14].

## Cost

Prices are interpreted as fair by a patient who as perceived the quality of care to be high. The implication is that those patients who think the fees are too high are also dissatisfied with the quality of care [14].

**Table 2** Core principles of provision of professional information for patients

- Clear and easily understanding information
- Ensuring correct understanding
- True and fair discussion
- Encouraging patients to ask questions and answering these questions
- Non technical terms and everyday words
- Adequate time
- Specific and detailed information
- Non-patronizing behaviour
- Concern for patients limited technical understanding of oral health care
- Being caring and friendly
- Avoiding negative talks
- Specific emphasis on health education and prevention
- Responsibility of patients for long term success of care
- Respect for self determination right of patients and acting in an advisory capacity
- Concern of patient language barriers and ability to understand
- Not being over-positive with the treatment plans and increasing patients expectations unrealistically

## Facilities

Although not considered to be as important as other factors in determining patient satisfaction the clinic facilities for example the neatness, comfort of seating, background music have been shown to influence patients [14].

## Conclusion

Treatment outcomes in prosthetic dentistry is composed of several complicated parts and one is the concept of patient satisfaction. At first sight the notion of satisfaction may seem unproblematic but as yet there is still no common and unifying definition of this concept. When focusing the implications of this paradox and acknowledging the limitations it can be concluded that prosthodontic rehabilitation is facilitated by a calm well informed and cooperative patient. Satisfaction is therefore to be defined differently for different patients and for the same patient at different times.

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