Prosthodontics and the Patient: What Is Oral Rehabilitation Need? Conceptual Analysis of Need and Demand for Prosthodontic Treatment. Part 1: A Conceptual Analysis

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Purpose: The concepts of need and demand are central in studies on dental care. In the literature, a normative definition is often used, but it pays little attention to the individual's personal comfort and quality of life. Need and demand for prosthodontic services are difficult to measure, as prosthodontic treatment is highly individual and not closely related to edentulousness. Need, however defined, does not always lead to demand for treatment, depending on a variety of factors. Materials and Methods: The present article is part of a larger study in which the intention is to evaluate need and demand for prosthodontic treatment among the participants in a 1989 and 1999 longitudinal study of a population sample. As the first step, this article reports a conceptual analysis of the need concept from the literature. Results: Need is stated as socially established in the interaction between patient and clinician. It makes demand dependent on available treatment options from the care provider and society. In the prosthetic treatment decision-making process, the emancipatory perspective with the patient-clinician dialogue is of utmost importance to achieve an optimal treatment result. Conclusion: The professional attitude toward need must be that there is no true objective or subjective need. Need is established only in a communicative dialogue with mutual respect between the professional and the patient. Int J Prosthodont 2005;18:75-79.

The concepts of need and demand are central in studies on dentistry. Need has been defined as "the quantity of dental health care which expert opinion judges ought to be consumed over a relevant time period, in order to remain or become as dentally healthy as is permitted by existing knowledge."¹ However, such a definition gives little attention to the individual's personal comfort and quality of life. Furthermore, it requires knowledge about the individual's dental health situation, available treatment options, and exact definitions of what should be regarded as "dentally healthy."^{2,3} The decisive argument against such a definition is that it gives the power to decide need to someone other than the person who has the need. Thus, it contradicts the whole idea of "patient empowerment,"⁴ which is the central tenet of modern health theory.

Need, however defined, does not always lead to demand for treatment,⁴ depending on factors such as individual preferences, cost, cultural differences, psychosocial considerations, comfort, age, and accessibility of services. Need and demand for prosthodontic services are difficult to measure, as prosthodontic treatment is highly individual and not directly related to, eg, edentulousness^{5,6} or masticatory function.^{6,7} In most industrialized countries, the demand for prosthodontic treatment is more influenced by esthetic demands rather than a few missing teeth in the posterior re-

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gions.^{7,8} Therefore, so-called sociodental factors, social and cultural background, socioeconomic aspects, oral comfort, and appearance should be included and evaluated in studies on need and demand for prosthodontic treatment.

Longitudinal studies are necessary when studying need and demand for prosthodontic treatment. There are, however, few such reports in the literature.⁹ The present article is part of a larger study in which the intention is to evaluate need and demand for prosthodontic treatment among the participants in a 1989 and 1999 longitudinal study of a population sample. This analysis (see Appendix) will set the theoretical ground for the analysis of data from the longitudinal study mentioned above.

In 1965, David Easton^{10,11} presented a model in which need is transformed through a "gatekeeping" process that filters and aggregates the need into demand. The present study performed a conceptual analysis of the need concept from the literature; a forthcoming survey will focus on the gatekeeping processes between need and demand and between demand and utilization of dental treatment.¹⁰⁻¹²

Widening Definitions of Health and Need

Needs have been described as states of a client that create a requirement for care,¹³ which gives a potential for service but does not always lead to service, and use of services does not always come from need. This transformation of need into use of service is complex. There is, furthermore, the possibility that providers of health care, as dentists, also bring their own needs, wants, and demands to the clinical situation, and that this may have an important impact on the utilization of care.¹⁴ The most self-evident need felt by a physician in relation to patients is the need to make sick people well or, for a dentist, to rehabilitate people with poor dentition or occlusal disturbance. A common image of a rational clinician is that of someone who always performs sophisticated treatments.¹⁵ To separate the clinician's own needs, wants, and demands from the clinical decision-making process will, to some extent, give clues to which treatment is provided. It has also been suggested that economic incentives exist for the care provider to exaggerate or minimize needs in the patient.¹⁶

A definition including effectiveness of treatment, often used in evidence-based medicine,¹ suggests that, "A need for medical care exists when an individual has an illness or disability for which there is an effective and acceptable treatment or cure."¹⁷ Still, the concept of need can be analyzed further.

Does Human Need Exist?

The concept of need belongs to the social sciences, where many suggestions differ from the relatively unanimous medical traditions. There is still no generally accepted method for measuring human welfare because of the difficulties of defining human needs. Moreover, human needs have been considered to be relative rather than a generally applicable concept.¹⁸ If need is defined by professionals, this simply pits one subjective opinion the professional's—against another subjective opinion the patient's. In a conflict situation, the strongest party prevails, usually the professional. A subjectivist and relativist conception of need therefore inevitably gives a disadvantage to those who are too weak, old, or sick to express their own needs, precisely those persons whose needs the professional should try to meet.

Objective Need

There are theories suggesting that objective needs do exist, and that the most important attributes are physical health and autonomy.¹⁸ Autonomy is impaired when there is a deficit of three attributes: mental health, cognitive skills, and opportunities to engage in social participation.

There are other, simpler attempts to define objective needs, and one theory suggests a hierarchy of needs in which the most basic needs must be met before needs higher in the hierarchy can be actualized.¹⁹ This implies that health needs must thus be satisfied before autonomy, as the need for health is a condition for subsistence.

Taxonomy of Need

A taxonomy of need was presented in 1972 by Bradshaw,²⁰ who divides need into four separate definitions:

- Normative need is that which the expert or professional defines as need in any given situation. A "desirable" standard is decided and compared to actual circumstances; if an individual or group falls short of the desirable standard, they are identified as being in need. This is reminiscent of the objectivist idea of need.
- Felt need is equated with want expressed after selfassessment by the individual or population; it is thus a subjectivist idea of need. A study of prosthodontic treatment need showed that subjective need without a normative need is rare.²¹ In only one third of the studied treatments did normative and subjective need coincide; normative need was significantly higher. The discrepancy between normative

and subjective need is in accordance with other reports.²²⁻²⁵

- *Expressed need* is equivalent to demand, ie, felt need turned into action.²⁰
- Comparative need is assessed by studying the characteristics of a population using a service; if there are people with similar characteristics not receiving service, they are in need. This definition has been used to assess needs of both individuals and areas. In the empirical parts of the present study, such a need conception was used.

Sheiham and Spencer²⁶ have analyzed normative need as being a commonly used type of need assessment in dental health planning. However, by using normative need, diseases are identified without considering the subjective perception of the patient and the relevance to the disease-oriented or biomedical approach.²⁶ Sheiham and Spencer²⁶ find four major shortcomings of normative need.

First, professional judgments are neither free of individual valuation nor objective. There is intra- and interexaminer variability in judgment and decision making.²⁷ Variables such as age, practice beliefs, and price competition in the marketplace have effects on treatment.²⁸ For example, many young clinicians in Sweden today have little or no experience in complete denture treatment, unlike general practitioners a few decades ago, which could lead to avoidance of proposing such treatment options because of lack of experience.²⁹

Second, the normative need defined by clinicians does not necessarily correspond to the experienced need of the patient. Patient satisfaction is not always related to the clinical assessment,³⁰ and, for example, lack of posterior teeth leads to demand for prosthodontic treatment in only some situations. Both type and quality of the treatment are important, but not decisive for patient satisfaction,³¹ although there is a relationship between health-related quality of life measures and clinical oral indicators.³²

Third, there is not always correspondence between political and professional need assessment. An example can be found in the Swedish National Dental Health Insurance System, in which persons aged 65 years and over receive a highly subsidized part of the total cost for prosthodontic treatment, irrespective of their dental health or paying ability. This was a purely political decision without professional support.

Fourth, there are not always resources to meet a normative need. All dental needs cannot be met. The need definitions depend on realistic treatment possibilities. Economic subsidies make new treatments, eg, dental implants, available. Need perceptions and demand grow rapidly, which points to another conception of need, so-called "emancipatory need."

Emancipatory Need

Need and demand are constituted in a dialogue between the patient and professional in which the professional should discern latent needs that are relevant but may be subconscious or unexpressed.³³ One can distinguish between manifest and latent needs. A treatment need becomes manifest when new treatment alternatives emerge, as with, for instance, dental implant treatment. Perceived need is dependent on the credible opportunities to meet the need. A professional way of dealing with latent and manifest need is through dialogue, which is the emancipatory perspective.

Especially in prosthodontics, there are legitimate claims for dialogue, and an ordinary decision-making process should also involve the patient. Prosthodontics is not a specialty dealing with treatment of an oral disease, but rather the branch of dentistry that focuses on oral reconstruction from a functional and esthetic point of view.³⁴

Evidence-based dentistry is considered the foundation of modern health care, but it is not the only method to be considered in prosthodontic treatments. Any evidence-based therapy must be used with care, as the treatment plan must be based not only on available treatment options, but also on the individual's need. Therefore, evidence-based therapy cannot be conclusive. Studies show considerable differences in how clinicians approach treatment alternatives and decide what the best option is.^{27,28} It has also been shown that patient satisfaction and need fulfillment increase if the patient is personally involved in the treatment planning process.³⁵

In some situations where patients have dental needs the professional cannot diagnose or satisfy, the need could be projections of discontent with situations or general conditions of life.³⁶ Thus, dysmorphophobia is an example in which dialogue is central in dealing with the problem of jointly trying to decide actual dental need.

Conclusion

Oral health is estimated through dialogue and professional assessment. Need is constituted by society and the interaction between patient and clinician. It makes demand dependent on available treatment options and resources from the care provider and society. If expensive prosthodontic treatments are made financially available for all individuals by means of subsidies, this could influence the existing need and create a new need among the population. In the prosthodontic treatment decision-making process, the emancipatory perspective with patient-clinician dialogue is of utmost importance to achieve an optimal treatment result. The professional attitude toward need must be that there is no true objective or subjective need. Need is established only in communication, with mutual respect between the professional and patient.

Appendix

Search Strategy

A literature survey was done by applying the PubMed database. PubMed provides access to bibliographic information that includes MEDLINE, covering the fields of dentistry, medicine, nursing, veterinary medicine, the health care system, and the preclinical sciences.

The search was continued in MEDLINE and PsycINFO. The survey covered the period from 1994 to August 2002 and used the Medical Subject Heading (MeSH) terms:

need OR demand OR attitude OR requirement; prosthodontics OR dental implants OR dentistry OR dentists; combination (1) AND (2) limits: English, human

The search strategy resulted in 509 articles, of which 147 abstracts were collected from articles with an approach to dentistry or concentration on conceptual analysis of the MeSH terms in the first selection group. Furthermore, a hand search of the references in these papers was undertaken to find more articles of special interest.

Selection Criteria

Papers were excluded if the studies they reported did not have an approach to the patient's needs, demands, and attitudes.

Acknowledgment

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Literature Abstract

Group function or canine protection

The study tested the effect of group function and canine protection on general chewing patterns, as well as movement in the terminal part of the chewing cycle. Five subjects were restored with implant-supported fixed complete dentures for the maxilla, and natural dentition or fixed restorations for the mandible. LEDs (Selspot system) were used to register the chewing patterns. The light signals were recorded by camera and analyzed in a computer. Canine protection occlusal scheme was given to the subject. The first registration was performed after 4 months. Then the occlusion was modified to group function, and a second registration was made five months later. Only two test subjects were able to attend the third occlusal registration when the occlusal scheme was changed back to canine protection and registration was made 6 months later. There were several findings between the two occlusal schemes: 1. The angle of departure was steeper than the angle of approach for the canine protection occlusion, but there was no statistical difference between these angles in the group function occlusion; 2. The mean maximal lateral shift and mean total mandibular movement at opening and closing during chewing of test bread were all greater with group function occlusion than with canine protection; 3. The mean maximal mandibular velocity was greater with group function occlusion then with canine protection; 4. The variations in three dimensions at the most cranial position were mostly greater with group function than with canine protection; and 5. The duration of the chewing cycle was stable intraindividually between two registrations.

Jemt T, Lundquist S, Hedegard B. J Prosthet Dent 2004;91:5:403–408. Reprints: Dr Torsten Jemt, University of Göteborg Faculty of Odontology Box 33070 Gothenburg 400 33 Sweden—Jasmine Chun, Taiwan, Republic of China Literature Abstract

Risk indicators for posterior tooth fracture

This case-control study of risk indicators for posterior tooth fracture evaluated 39 potential risk indicators. A total of 200 patients, each with one fractured tooth, and 252 patients (749 control teeth) without fractures were recruited from a large dental group practice in Portland, Oregon. Clinical examinations and patient surveys were carried out to obtain information on the list of potential risk indicators. Clinical examinations were carried out prior to any treatment to collect information on the fractured tooth and comparison tooth, eg, mobility, Class V restorations, cervical defects, craze lines, tactilely detectable fracture lines, subsurface discoloration, endodontic access preparations, restorative material, restored surfaces, tooth-supported partial denture, and canine or group guidance. Relative volume proportion between restorations in the tooth concerned was also calculated. Patients completed a 14-item questionnaire to allow the study to elicit demographic data, information about behaviors, experiences, and symptoms that may be associated with tooth fracture. For control subjects, a minimum of two restored teeth of the selected tooth type that were uncrowned was used. Logistic regression (backward-selection method) was used to develop models identifying risk indicators associated with fractures between case and control subjects, as well as between case and comparison teeth in case subjects. Two risk indicators were strongly associated with cusp fracture in both models (P <.001): presence of a tactilely detectable fracture line and the proportional volume of the restoration.

Bader JD, Shugars DA, Martin JA. J Am Dent Assoc 2004;135:883–892. Reference: 21. Reprints: Dr James D. Bader, Department of Operative Dentistry, School of Dentistry, CB#7450, University of North Carolina, Chapel Hill, NC 27599-7450. e-mail: jim_bader@unc.edu—Alvin G. Wee, Columbus, OH

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