



RESEARCH ARTICLE

ATTITUDES TOWARDS PROSTHODONTIC CLINICAL DECISION-MAKING FOR EDENTULOUS PATIENTS AMONG DENTAL STUDENTS

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ABSTRACT

Aim: The aim of the study is to describe the attitude of year three dental students towards prosthodontic clinical decision-making for edentulous patients.

Objective: The objective of the study is to describe the attitude of year three dental students towards prosthodontic clinical decision-making for edentulous patients and to identify whether there are gender differences in these attitudes.

Background: Decision making is an essential part of all healthcare delivery. Clinicians need to appraise a wide range of factors prior to arriving at a decision that represents optimal care for their patient. These factors include clinical factors, patient values, the available research evidence, clinical guidelines, their previous clinical experience and medico-legal implications.

Reason: The edentulous state is a chronic condition and prosthodontic interventions will inevitably require multiple treatment sessions and long term care. Therefore proper decision making is required.

Result: 83% of the dental students acknowledged an influence from their own person values on their presentation of material to patients who are in the process of choosing among different treatment options and 89% thought their edentulous patients were satisfied with the decision making process when choosing among different treatment options, 73% of dental students supported a strategy of negotiation between patients and clinicians(shared decision making).

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INTRODUCTION

Decision making is very important in all aspects of healthcare delivery. Clinicians need to assess the values of a wide range of factors prior to arriving at a decision that represents optimal care for their patient. These factors include clinical factors, patient values, the available research evidence, clinical guidelines, their previous clinical experience and medico-legal implications. Three models of the clinician-patient relationship have been described (Charles *et al.*, 1997):

Paternalism (traditionally the clinician makes decisions for the patient); Consumerism (primarily based upon patient preferences); Shared decision making (whereby a consensus is reached). Not fully considering patients' wishes as part of the decision making process and making judgements purely on technical factors, even if the decision is evidence based, represents a failure to respect the ethical principles of choice and free will, which are central to patients' autonomy. However, following a consumerist decision making style could lead to situations where the patient requests treatment that is at

odds with what the clinician believes is in the patient's best interest (Montgomery and Fahey, 2001). Shared decision making (SDM) allows both parties to play an active role in the decision making process and arrive at a decision through a negotiation. SDM is particularly suitable for long-term decisions (Joosten *et al.*, 2008), especially in the context of a chronic illness, and when the intervention contains more than one session. The edentulous state (loss of all teeth) is a chronic condition and prosthodontic interventions will inevitably require multiple treatment sessions and long term care. Prosthodontic rehabilitation of partially or completely edentulous patients is important in clinical practice, since the definitive treatment can improve oral function, esthetics and quality of life of most patients. Despite the great decline in dental caries and tooth loss in the last decades, it is believed that there will be an increased demand for prosthodontic care in future (Douglas and Watson, 2002). The SDM concept seems appropriate in such cases. Treatment options for the edentulous patient include no treatment, conventional complete dentures, implant retained overdentures and implant supported fixed bridgework. Involving edentulous patients in prosthodontic decision making is essential due to the diverse range of functional outcomes (Harris *et al.*, 2011), risk of complications and costs (Stoker *et al.*, 2007) associated with the various

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therapies. Traditionally, determination of prosthodontic treatment options and selection of treatment have been considered part of the practitioner's professional responsibility. In contemporary clinical practice, patients are increasingly assuming an active role in determining their actual treatment needs, by stating their expectations and desires. (A Sociodental approach in prosthodontic treatment decision making, 2004) The amount of clinical decision making experience that undergraduates develop in undergraduate degree courses varies considerably depending on curriculum design (McHarg and Kay, 2009) In more traditional dental school environments, prosthodontic options may have been decided before the student sees the patient for a particular type of treatment or prosthesis. In other styles of undergraduate dental education based in primary care settings (Ali *et al.*, 2012), students may become involved in prosthodontic management decision making more readily, although in a supervised fashion. Inconsistencies among clinicians' treatment decisions have a financial impact and ultimately can affect clinical viability of the treatment outcome. (Shugars and Bader, 1996) Therefore, an improvement in professional ability to identify patients reasons for intervention is required for a better clinical practice. (Bader *et al.*, 1999) Problems observed in clinical practice such as different approaches to treat similar situations and failures in evaluating risk factors can lead to ethical problems and litigation. This is particularly important when intervention decisions are made. So this study aims at assessing the attitude of year three dental students towards prosthodontic clinical decision making for edentulous patients.

MATERIALS AND METHODS

Questionnaire development

The questionnaire was self-formulated and was delivered by hand and collected on completion. The medium of answering the questionnaires was English. All the responses of the questionnaires were kept anonymous. The questionnaire contained 8 questions. The questions were framed in order to assess the attitudes and beliefs of third year dental students towards prosthodontics clinical decision making for edentulous patients.

A short clinical scenario of the discussion of treatment options with an edentulous patient was posed. The first five questions were related to the influence of the dental students and patient's value towards the treatment planning for an edentulous patient. The final two questions were related to the patient's beliefs about the optimal way of approaching clinical decision making. 100 third year dental students were randomly selected to complete the questionnaire.

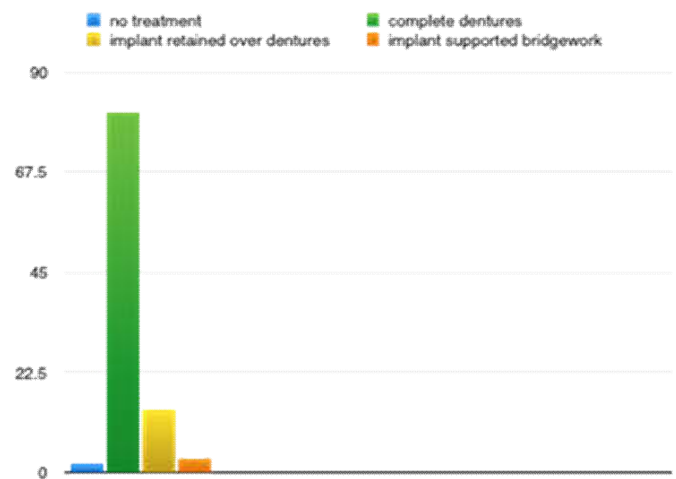
Study sample

100 third year dental students from Saveetha dental college were approached to complete the questionnaire. Pilot questionnaire was administered to these students and they were given sufficient time to consider fully their choice to participate in the study and to complete the questionnaire if willing.

Statistical analysis

The responses to each of the eight questions were entered in Microsoft excel sheet and summarised through bar chart.

RESULTS

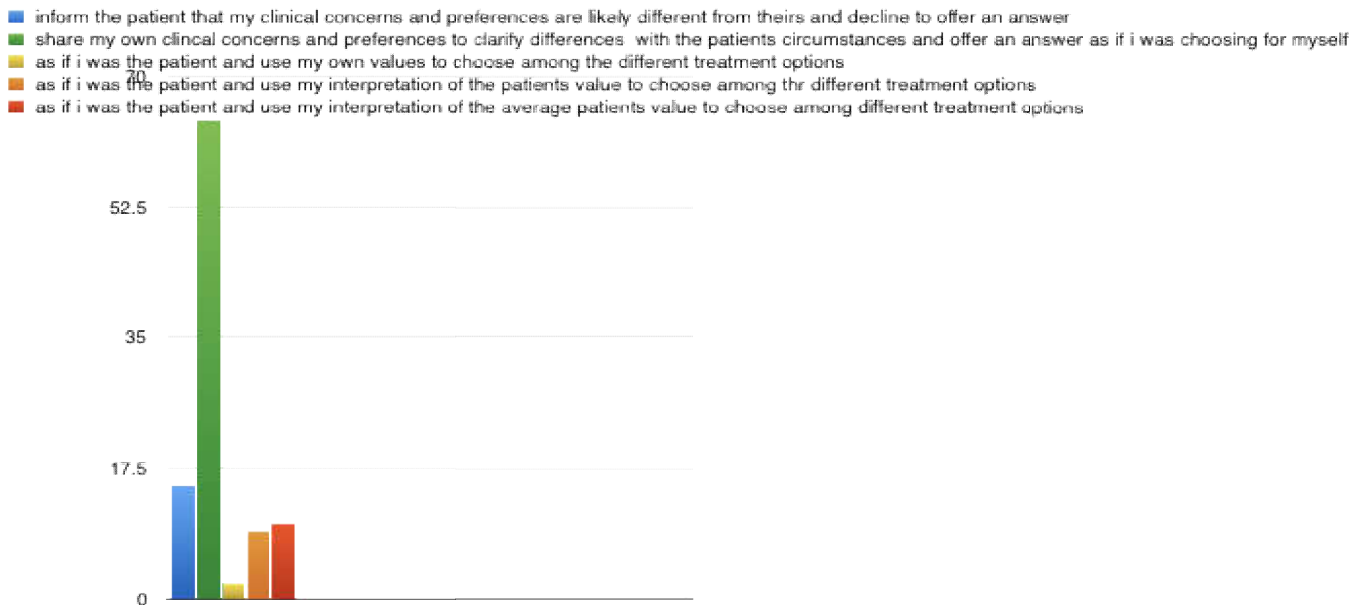


Graph 1. Treatment plan

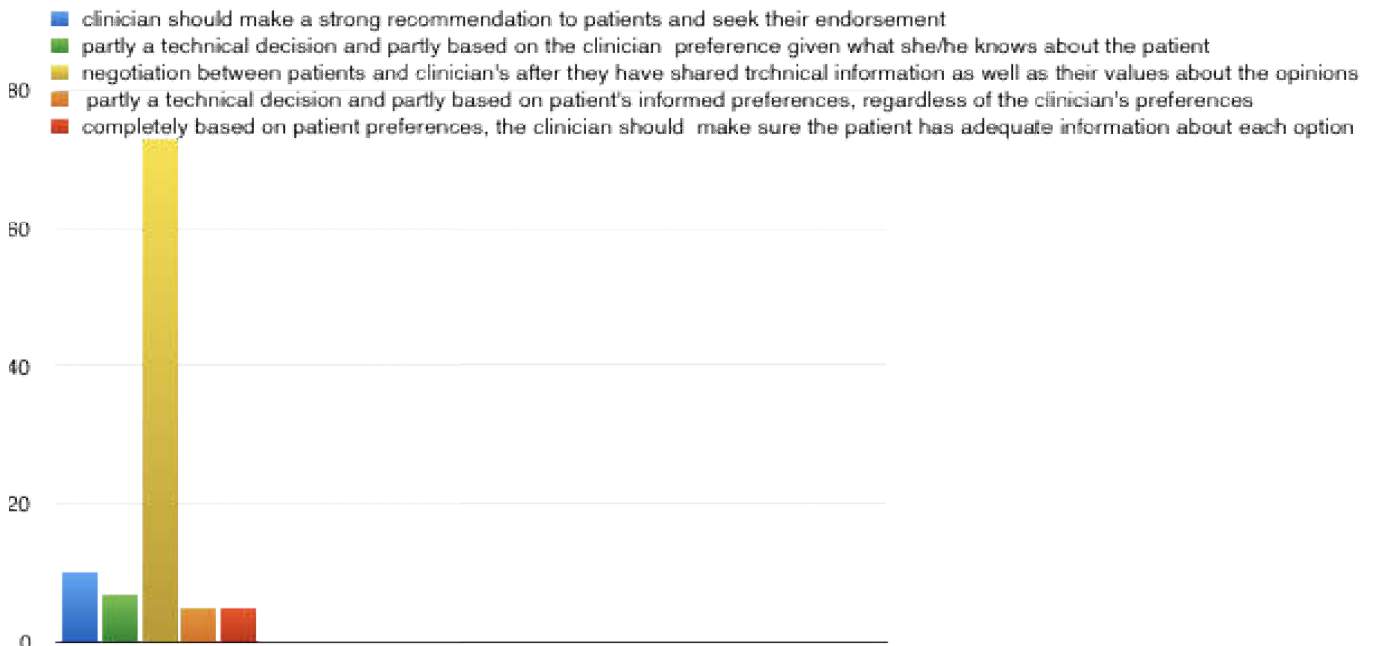
Edentulous patient's value in helping edentulous patients make treatment decisions	
Very important	37.4%
Important	53.5%
Neutral	3.1%
Unimportant	3%
Very unimportant	3%
Dental students' value in making treatment decision	
Very important	36%
Important	45%
Neutral	10%
Unimportant	7%
Very unimportant	2%
Edentulous patient's family value in decision making	
Very important	12%
Important	63%
Neutral	9%
Unimportant	14%
Very unimportant	2%
Presentation of materials to patients who are in the process of decision making	
Very important	39%
Important	44%
Neutral	8%
Unimportant	6%
Very unimportant	2%
Satisfaction of the edentulous patients during the process of decision making	
Very important	44%
Important	45%
Neutral	3%
Unimportant	2.1%
Very unimportant	0.1%

DISCUSSION

The aim of the study was to know about the attitude of the year three dental students towards prosthodontic clinical decision making for edentulous patients. In this study, the questionnaire was based on the literature review that identified a previously developed and published instrument (Koka *et al.*, 2007). Closed questions were used and it is acknowledged that with such designs the richness of responses can be lower (Houtkoop-Steenstra, 2000; Attitudes towards Prosthodontic Clinical Decision-Making for Edentulous Patients among South West Deanery Dental Foundation Year One Dentists, 2016). Such a design was necessary however, in order to generate quantitative data that would address the aim of the study (Attitudes towards Prosthodontic Clinical Decision-Making for Edentulous Patients among South West Deanery Dental



Graph 2. Clinicians and patient's decision to arrive at optimal treatment option



Graph 3. Clinicians response in patient's view

Foundation Year One Dentists, 2016). The Likert scale is a summated rating scale and is commonly used to assess attitudes (Ary *et al.*, 2009). The Likert scale does not measure the attitude per se, but in this study allowed the comparison of survey items, for example, the participants' perceptions of the relative importance of dentist's, patient's and relatives' values in decision making. The questionnaire was intended to provide an insight into the psychological perspective and attitudes of the dental students towards the decision making process with edentulous patients, not assessing the actual clinical practises of dentists. The respondents' anonymity was protected, and this was made clear to potential participants. This helps reduce method bias and increases validity especially at the judgement and response editing or reporting stages (Podsakoff *et al.*, 2003). Regarding treatment plan for edentulous patients, 81% of the dental students chose for complete dentures and 3% opted for implants. This suggests that the dental students don't

have much knowledge regarding implants. The results demonstrate that the dental students rated the edentulous patient's values as more important which was 90.9% than either their own values (91%) or those of the patient's family or friends which was 75% in helping edentulous patients make treatment decisions. This suggests that the principle of shared decision making or even a consumerist model is supported. This is encouraging since shared decision making, with patients taking a collaborative decisional role, has been shown to be the preferred model of decision making by patients in both a primary care and secondary care dental setting (Chapple *et al.*, 2003). The concept is also in line with the medico-legal requirements of obtaining informed, valid consent to treatment and respecting patient's autonomy. Dental students also have the responsibility to ensure that patients have had the best opportunity to be involved in decision making. Regarding how the dental students present material to patients, in addition to

what is actually said, the eyes, face, posture and gestures form a package of non-verbal communication that can affect the perceptions of others (Furley *et al.*, 2012). About 89% of the dental students considered their patients to be highly satisfied with the decision making process, a high level of discussion treatment options is suggested. Undergraduate students' confidence in dentist-patient interactions has been shown to be related to how well students felt they were taught and how often they encountered the situation. Few of the dental students indicated that their patients were of neutral opinion or dissatisfied with the decision making process. This could be due to a lack of confidence in complete denture techniques, or it could relate to the lack of routine NHS funding for implant retained prostheses in primary and secondary care (Andrews *et al.*, 2010). For those unable to afford implants in the independent sector, some edentulous patients may, unfortunately, have no choice at all. (Attitudes towards Prosthodontic Clinical Decision-Making for Edentulous Patients among South West Deanery Dental Foundation Year One Dentists, 2016). The responses to Question 7 on being asked "What would you do if you were me?" produced a variety of responses. The majority of dental students (64%) would offer an answer, based on their clinical concerns and preferences to clarify their patient's circumstances and offer an answer as if they were choosing for themselves. 15% of dental students offered an answer, expressing that their clinical concerns and preferences are likely to be different from the patient's and declining to offer an answer. It could be viewed that declining to offer an answer is perhaps the most professional and ethical in that what the patient is really seeking by asking the question is the clinicians' recommendation on the best plan. Perhaps this option was unpopular due to the pressure felt by clinicians to help patients. 9% Of dental students indicated they would use their own values to answer the question, rather than their interpretation of the patient's values or even using what they considered to be the average patient's values (10%). Few dental students (2%) indicated they would choose to answer the question as if they were the patient using their interpretation of the patient's values. One must consider how accurately and comprehensively dentists can appraise patients' values and preferences in a dental consultation appointment. It has been shown (Garcia-Retamero and Galesic, 2012) that doctors make more conservative treatment choices for their patients than for themselves, even if they accurately predicted that their patients would want a riskier treatment than the one they selected. Reasons behind this include the fear of legal consequences (Garcia-Retamero and Galesic, 2014). If these findings are applicable to dentistry, they would have relevance to the patients listening to recommendations from dentists, particularly since the patients were not aware of these discrepancies and thought that the decisions their doctors made for themselves would be similar to the decisions they made for their patients (Garcia-Retamero and Galesic, 2012). Question 9 was a realistic question that trainees most likely could have been asked in the past by patients, and so their response may well represent actual personal experience. It is known that patients' preferred decision making style or role is not static (Chapple *et al.*, 2003). It varies within individuals and between individuals greatly, depending on factors such as the age and gender of the patient, gravity of the decision to be made, the clinical practice setting, the knowledge of the subject being discussed, trust in the dentist, time constraints, dissatisfaction with previous dental treatment, dental pain and the threat of wearing dentures (Chapple *et al.*, 2003).

Conclusion

One conclusion that has been made is that participants have indeed had adequate training in decision making skills, and that they have treated a sufficient number of edentulous patients in order to form these opinions. Dental students considering their patient's value more than their values suggest that they give more importance for their patients in the process of decision making. Perhaps the ideal decision making style for dentists is an adaptive one, which varies according to the wishes of activity or passivity of the patient in decision making, whilst all the time respecting patient autonomy. The general consensus supporting shared decision making as an approach to decision making is encouraging, and is supportive to foster ethical and professional values among dental students.

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