

Empathy in the dentist-patient relationship: review and application

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ABSTRACT

Background and objectives: A review of psychology, dental, and medical literature aimed to identify key variables for an ideal dentist-patient relationship. When empathy surfaced as the key positive variable, a further aim, which became the aim of this paper, was to explore how empathy could be intentionally applied.

Methods: An online database search, limited to judgements selected target-words, was conducted for peer-reviewed papers on the dentist-patient relationship. Review guidelines from the American Psychological Association were used to clarify concepts, identify where most work was focussed, and to explore the superiority of any approach to the topic, over another.

Results: The distinction between instrumental (information) and affective (emotional) communication was important with empathy being the key variable. Empathy was seen clearly to facilitate improved communication and the experience of dentistry for patient and practitioner alike. Empathy was positively associated with negotiated treatment plans, treatment adherence, increased patient satisfaction, and reduced dental anxiety. However, the concept of empathy was rarely operationally defined, or empirically measured. At best it was a scale score or a theme in qualitative data analysis. As such, applied empathy is discussed as a perceived concept. Dental school curricula and patient request forms were found to have the greatest potential to train dentists to convey empathy, and for patients to perceive empathy.

Conclusion: Future directions are proposed, to apply empathy in the dentist-patient relationship through an integrated model of patient-centred communication.

While it is easy to presume that the dentist and patient relationship is a simple case of professional/client dynamics, dentist-patient communication has been historically marked by anxiety on the part of the patient and occupational stress for the dentist. This latter problem is experienced not only in interpersonal exchanges, but over the course of a career in the kind of negative stereotyping of dentistry that has reduced the enjoyment of dental practise (Jones et al. 2013). The context

of western dental practice carries particular vulnerabilities and opportunities for the people involved. Miscommunication vulnerabilities exist where there are pressures on dentists to perform a technically complex and difficult tasks within times allotted by an appointment schedule. Balancing this, opportunities also exist to enhance the communication aspect of the dentist-patient relationship: from the awareness of the need to train dental students in the motivational interviewing and active listening techniques that recently few dentists reported having (Ayers et al. 2008); to patients having access to information about dentistry and to the dentist personally, via the internet. Although patients may now better understand their own oral health needs and dental treatment options, if there is a communication barrier between them and their dentist, appointments may begin with unrealistic expectations. This could reinforce an anxiety-stress cycle, and the negative stereotype of dentistry.

In general, medical patient and health practitioner communication has received much attention in research and theory. Reviews have been compiled by Ong et al. (1995); and more recently, by Harrington et al. (2004). However, despite specific challenges, contemporary dentist-patient interactions remain relatively unexamined. The historic prevalence of dental anxiety (De Jongh et al. 1995) alongside recurrent social and occupational stresses faced by dentists (Jones et al. 2013), prompted a review of the literature on the dentist – patient relationship, with the aim of clarifying key issues and assembling a model for potential improvement in dentist-patient interaction.

Dentistry can benefit from the large body of research devoted to general medical practitioner-patient communication, but there are important differences. Dentistry, by its oral nature, physically limits the ability of patients to communicate verbally, during the treatment phase of a consultation. Hence it requires a different approach to information exchange, particularly in relation to negotiated treatment planning, treatment adherence and enhancing patient satisfaction. The costs of ineffective communication can be a downwards spiral, with dental neglect leading to more unpleasant dental experiences for the patient; and a stress-cost for the dental team dealing with them.

This paper began as a general literature review that was part of a psychology summer studentship that included establishing an outline of the contemporary dentist-patient relationship. As that review raised empathy as the key variable in dentist-patient communication, the direction of the work changed to discuss ways of intentionally applying it. The aim of the present paper then, is to use the selected, supporting background literature to discuss what could be most useful in the future to improve the dentist-patient relationship: teaching communication in dental schools, and using patient request forms.

METHOD

Sample

An initial, general, online database search for peer reviewed journal articles used the words: “dental”, “anxiety”, “child”, “health”, “questionnaire”, “adherence”, “negotiation” and “empathy”. Three English language databases, PsychInfo, Medline, and Google Scholar, were searched. Further articles were identified from the reference lists of full papers selectively reviewed.

MATERIALS

Retrieved and reviewed articles included 10 on patient-doctor communication, eight articles on dental health, 12 articles on dental anxiety, 15 articles on dental requests and questionnaires, nine articles on adherence to treatment regimes, and four articles on patient-age considerations. The articles were selected on a judgemental basis linked to citations and apparent relevance.

PROCEDURE

The review followed general APA guidelines where the starting point was the question, what is the contemporary state of dentist-patient relationships? Definitions and terms were clarified. The pattern of what variables most work had been conducted on, was outlined. Potential flaws were considered. Data were explored for consistency and contradictions. Any apparently superior concepts were highlighted and from them, future directions were suggested.

RESULTS

The general findings from the reviewed literature suggested that communication between dentists and their patients could be the weakest aspect of contemporary dentistry. Kvale et al. (2004) validated and retained communication as one of three factors in their revised Dental Beliefs Survey. They stated that communication seriously affects both patient satisfaction and patient compliance with the dentist's recommendations, while poor communication plays a causal role in patient anxiety. Lahti et al. (1995) conducted a survey of 277 Finnish dental patients seeing 33 different dentists, to gauge discrepancies between patient expectations and actual service provision. Their study reported that communication was the single, most common, patient expectation left unfulfilled. Hamilton et al. (1994, p. 1), suggested that “communication plays a central role” and the more effective communication, the more potential there is to reduce dental anxiety. They proposed that information-sharing plays a particularly important role in dentist-patient communication, which is consistent with general medical findings (Smith et al. 1981; Beisecker and Beisecker, 1990). Underpinning effective communication, where anxiety and stress exist, was the development of empathy.

In reviewing health communication literature, it is important to establish that empathy is not a “touchy-feely” amorphous concept, but one with empirical evidence of neurobiological changes correlated with observable, pro-social behaviour. Mogil (2012) suggested that the belief that only humans, or possibly higher primates, may exhibit empathy and/or pro-social behaviour, has been truly debunked. Various rodent experiments revealed behaviour whose purpose can only be described in terms of the achievement of a goal for another. An example of this is the Batal et al. (2011) research where rats taught themselves to open locked cages and liberate another rat for no apparent reward, and no response reward from the experimenters.

In the context of the dentist-patient relationship, empathy takes an interesting twist. Where empathy is generally described in empirical terms for the person displaying empathy (the dentist), the key feature in the dentist-patient therapeutic relationship is not whether there is a display of empathy but whether the person experiencing negative affect (the patient) perceives empathy in the relationship. That is, the patient needs to believe they are receiving an empathetic response from the dentist. Although there may be others involved in a dental appointment such as support people for the patient and the dental team for the dentist, this paper will focus on the dyad at the core of dental treatment, and the literature where empathy is used to explain outcomes.

EMPATHY IN DENTAL SCHOOL TRAINING AND BEYOND

Empathetic communication appears to be a particularly important, but under-provisioned, aspect of dental education. Kulich et al. (1998) found support for their hypothesis that dentists themselves would rate interpersonal skills as “highly relevant” to the dentist-patient relationship and to dental school curricula. They surveyed 64 dentists working in Sweden who rated a cumulative factor of interpersonal skills as more important than theory (z-score = -3.16, $P < 0.002$), self-confidence (z-score = -5.35, $P < 0.001$), and simultaneous capacity (z-score = -6.00, $P < 0.001$). Interpersonal skills were rated at approximately the same level of importance as manual skills (z-score = 0.59, $P < 0.556$) (Kulich et al. 1998).

Foucault (1990) argued that society elevates health practitioners' status well above that of their patients, due in part to inequalities of knowledge and power. Alongside the development of highly technical skills, the dental student's realisation of the power differential between them and their patients may help to explain reported loss of dental student empathy during undergraduate training (Sherman and Cramer, 2005). Sherman and Cramer used a medical empathy scale, the Jefferson Scale of Physicians Empathy (JSPE), which they validated with dental students and then tested with 133 participants over their four years of training. They found that dental students' empathy scores were significantly higher ($F=6.57$, $P < 0.01$) in the first year of training, and dropped in each subsequent year of training. Sherman and Cramer argued that empathy should be a “core competency” (p. 338) for dentists, and that the decline in empathy was assumed to impede the interaction between dental student and patient.

Yedidia et al. (2003) identified the potential for integrating communications training into initial training for medical practitioners. Compared to a non-intervention control group, medical students who had received integrated communications training received higher ratings for: relationship development and maintenance (5.3% difference, $P < 0.001$); patient assessment (6.7% difference, $P < 0.001$); and negotiation and shared decision making (5.7% difference, $P < 0.001$). Although the study did not use blinding to avoid bias, trainees were rated by individual patients who were unlikely to be aware of differences in course curricula. Interestingly, the intervention group also received higher ratings for their overall examination score (5% difference, $P < 0.001$) and for organisation and time management (1.8% difference, $P < 0.001$); suggesting that communication training benefitted overall effectiveness and efficiency.

Hannah et al. (2004) identified a particular need for communication training. They studied a group of 67 NZ dental

students who completed a course on active listening, recording medical histories and handling emotions. Survey data suggested that 83% of students rated communications as more important at the conclusion of the course than they had prior to its commencement. The students were significantly more likely to report the development of their communication skills, greater self-confidence, and increased interest in communication skills. Although students were in only their third year of dental training, and the communications-training benefits were not tested against performance in the field, the self-reported outcomes reinforce the potential for benefits from training dentists in communication skills.

The few studies that have examined the effects of communications training in dental practice over many decades have highlighted the importance of good communication for effective dental care (Jackson, 1978; Nestel and Betson, 1999; Manogue et al. 2001). Van der Molen et al. (2005) found that communication training improved dentists' reactions to anxious patients ($M = 4.3$, $P < 0.06$). These findings may be particularly relevant to common communication difficulties with young patients (van Laerhoven et al. 2004). Improving interactions with child patients may stave the development of dental anxiety, which typically begins with childhood experiences of dental treatment (Milgrom et al. 1988; De Jongh et al. 1995). An apparent lack of empathetic approaches contrasts with conclusions from Samat et al. (2001): that empathy training for dentists could greatly improve cooperative behaviour by their young patients; and that this could make a substantial improvement to treatment outcomes.

Another outcome of perceived empathy, which was theoretically linked to patient satisfaction by Hadlow and Pitts (1991), then Ong et al. (1995), was improved treatment adherence. More recent research that examined patient anxiety and adherence in the dental setting found that an empathetic approach from dentists was particularly beneficial (Samat et al. 2001). Empathetic approaches, whether elicited through pre-visit questionnaires, or from other techniques acquired during dentist training, were highly correlated ($r = +0.60$, $P < 0.001$) with reductions in patients' anxiety.

THE DISTINCTION BETWEEN AFFECTIVE COMMUNICATION (E.G. FEELINGS) AND INSTRUMENTAL COMMUNICATION (E.G. INFORMATION).

Ong et al. (1995) referred to Roter and Hall (1992) and a wide range of twentieth century research, to explain the particular importance of inter-personal relationships. They concluded that a trusting relationship between practitioners and patients benefits both short and long-term outcomes, across many prevention and treatment contexts. They critique the fallacy of making a distinction between affective communication, for example about feelings like dental anxiety, and instrumental communication, for example about dental procedures. Affective and instrumental communications have considerable overlap. What are apparently instrumental exchanges, such as the provision of information about routine treatments, still require affective communication—empathy, because there is an emotional element to patients receiving treatment options in a context where most treatment is negatively perceived (Smith et al. 1981; Beisecker and Beisecker, 1990). This overlap appears to have held for doctors (see Squier, 1990) as well as dentists (see Hannah et al. 2004). In instrumental

communication, misunderstandings may impact affect when a patient interprets a technical term using the lay equivalent (Hadlow and Pitts, 1991). For example, Hadlow and Pitts reported an anecdote of a child dental patient who became quite agitated before undergoing intravenous sedation (IV sedation), reporting later that he thought he was getting IVY sedation, and he knew ivy was a poison plant.

Research by Ben-Zira (1980) and Hall et al. (1987) suggested that the difference between affective and instrumental communication was not always clear to their patient-participants. It may be more useful to see affective and instrumental content as two related and important, facets of patient-practitioner communication. Kubacki (2003) expressed the opinion that to establish rapport there needs to be mutual perceived liking between medical doctor and patient. Klitzman (2006) gave practical examples, through studying the impressions of two doctors, a medical student and a dentist who had become medical patients. As patients, these practitioners observed a distinct need for more empathetic, instrumental routines such as charting a patient's status at the bedside instead of in the nurse's station. Klitzman (2006) noted that these participants' comments were marked by a strong consensus.

Medical practitioner-patient communication has long suffered from misunderstandings. Ley (1988) reviewed three separate studies and found that between seven and 47% of patients did not understand their diagnosis due to insufficient or inadequate information exchange between them and their doctor. Ley suggested that this may be attributed to medical language, or the collection of specialist and technical terms used by medical professionals. This has links to sociologist Talcott Parson's theory of the competence gap, where a professional needs to hold an advantage over a patient and does so through language (Johnson, 1972). It can be further understood in terms of Foucauldian notions of knowledge-power (in Smart, 1985). While practitioners may require 'medical language' to develop their discipline and maintain professional control over medical ideology and possibly the legal and economic contexts of their practice, those same practitioners will need to use colloquial language to communicate effectively with patients. Role differences seem more germane to the modern context. The historically ingrained or socialised roles of active practitioner and comparatively passive patient, as outlined by Foucault (1990), have persisted. These contemporary role differences are also reflected in a positional analysis of Parsons' (1975) sick role, which has continued as a salient concept into the 21st century (Friedman, 2002). This leads to the question, whether a patient-centred approach to communication could be a solution.

QUESTIONNAIRES AND PATIENT SURVEYS

Joos et al. (1993, p. 751) described questionnaires as "the starting point of a patient-centred approach to care." Well-designed patient's pre-visit questionnaires (e.g. the medical patient request form by Valori et al. 1996) specifically help attenuate communication difficulties for medical practitioners and patients, and could be an aid for related stressors faced by dentists who are confronted by anxious or uncooperative patients. In medical consultations, direct and clear requests by patients have been positively correlated with successful outcomes, whereas when medical patients spoke about their needs more indirectly, they tended not to have their requests met. These patterns were observed in a discourse analysis of interviews with 30 patients and six doctors, by Robinson et al.

(2011). Patient request surveys may be of particular relevance. They have been repeatedly found to improve medical patient adherence (Roter, 1977; Eisenthal et al. 1979; Greenfield et al. 1985). Dailey et al. (2002) also demonstrated that dental questionnaires have specifically reduced patients' state anxiety, compared to a non-questionnaire control group ($F = 8.74, P < 0.0001$).

Further, an absence of empathy runs against patients' express need to perceive empathy, and reduces patient satisfaction. In a post-visit survey of dentists' behaviour and patient satisfaction, Corah et al. (1985) and later, Corah et al. (1988) found that 'accepting and caring' communications strongly correlated with patient satisfaction, amongst 231 and 250 adult dental patients, respectively. Kravitz et al. (1999) suggested that medical practitioners improve patient satisfaction by eliciting realistic expectations. If this is done with a pre-visit questionnaire, it can also alleviate patient anxiety, as found by Hornberger et al. (1997) (difference = -2.1, $P < 0.05$).

Dental questionnaires may be able to aid communication and contribute towards the reduction of patient management issues. However, dental practitioners have real limitations on time. Time management has been ranked with difficult patient management as the foremost occupational stress amongst dentists (Jones and Annan, 2013). If discussion of the results of a questionnaire completed by a patient before an appointment adds substantially to the length of the appointment, then patient request forms are unlikely to be given the attention they need to generate empathy or build on the patient's perceived empathy. In addition, Jackson et al. (2001) suggested that any questionnaire that aims for successful negotiation between medical patient and practitioner must be careful not to create false expectations. Instead, a worthwhile questionnaire could both elicit and facilitate expectations that can be reasonably met by a medical, or hypothetically, a dental professional. Hornberger et al. (1997) stressed that questionnaires need to be refined in order to translate requisite expense and time into facilitating realistic patient expectations, otherwise questionnaire designers risk constructing and administering apparently valid and reliable questionnaires to disillusioned patients and practitioners alike.

Hornberger et al. (1997) used a 25 item version of Like and Zyzanski's (1987) Request for Physician Services Schedule. They adapted the questionnaire for ease and relevance of administration. The 51 patients using the revised questionnaire received thirty percent more diagnoses, compared with a non-intervention group. This result could be due to any combination of factors: more diagnostic information; more pressure from the intervention group; and/or more time spent with intervention patients. Hornberger et al. (1997) found that the intervention group scored significantly lower on state anxiety with the Hospital Anxiety and Depression Scale, than the control group (difference = -2.1, 95% CI -3.5, -0.7), suggesting an empathy effect. Interestingly, the study's intervention group patients were not more satisfied than the non-intervention control. Instead, patients who had completed questionnaires tended to be less satisfied than the non-questionnaire group, reiterating the potential, when trialling an intervention, of raising expectations. There will always be limits on treatment and referral options, regardless of how clearly patients make a request or how easy it is to understand those requests.

In contrast, medical practitioners in the Hornberger et al. (1997) study rated their quality of service as statistically

significantly higher ($P < 0.05$) with the questionnaire-intervention group, than with the control group. Since the practitioners coded and used information from the pre-visit questionnaire as part of the patients' appointments, they were not blind as to which patients were in the intervention group. Having signed up for the experiment, it is possible the medicos were more favourably disposed towards the intervention group, which then influenced the efficacy of the questionnaire.

Dailey et al. (2002) found that patients experiencing state dental anxiety during the course of a dental appointment may benefit from pre-visit questionnaires. Patients handing their dentists a completed Modified Dental Anxiety Scale scored significantly lower than a control group, on the Spielberger State Anxiety Inventory administered post-appointment ($F = 8.74, P < 0.0001$). Dailey et al. concluded that, although many dentists are hesitant to emphasise patients' anxiety, pre-visit questionnaires can elicit empathy from dentists, for the patients who are in most need of it.

Pre-visit questionnaires create the expectancy of empathy for anxious patients (Dailey et al. 2002). The perception of empathy may reverse the conditioning of patients' negative prior experiences –considered to be the strongest predictor of dental anxiety, by Milgrom et al. (1988) and De Jongh et al. (1995). Improvements in perceived empathy may also contribute to the patient-centred approach advocated by Laine and Davidoff (1996) and Little et al. (2001). Generally then, reviewed reports suggest that pre-visit questionnaires could reduce anxiety in a range of patients and, where time is not an issue, contribute to dentists' satisfaction at work.

REDUCING DENTAL ANXIETY THROUGH PERCEIVED EMPATHY

An example of a patient-centred intervention for dental anxiety is the computer game Dental Jungle developed by Jones and colleagues at Massey University. Studies validated the psychometric properties of game components: dental anxiety (Jones and Buchanan, 2010), children's dental coping strategies (Williams and Jones, 2012), and information children wanted dentists to know but did not express before they found themselves in the dental chair with their mouths open (Jones and Watson, 2014). The patient request form component, the e-SAID (electronic survey of anxiety and information for dentists), is the computerised version of the "pen and paper" SAID (Jones and Huggins, 2012) that is expressly designed to promote perceived empathy when played by children (patients) in the dentist's waiting room.

The e-SAID is a proxy measure of the dentist's empathy for the child's feelings about the appointment. Three embedded subscales tap into anxiety, preferred coping style and dental neglect; and the child has the opportunity to request emotional support, information, and treatment options. A feature of the e-SAID design is that children print a pre-coded summary of their patient request form to hand to the dentist or dental therapist. In the pilot stage, children reported that they believed that the dentist (or dental therapist) would know from this how they were feeling, how they preferred to cope, and specifically any requests that they had made by typing them into the program. The pre-coding permits the child's main issues to be identified quickly, without appointment time being greatly impacted by the use of the form. An e-SAID trial intervention, using a pre-post anxiety

measure in a randomised control trial was run in a NZ clinical setting with over 150 children aged 10-13 years and from a range of cultural backgrounds. Early findings were promising with a mean 5.5% decrease between pre and post anxiety measures for children who completed the e-SAID, compared to a mean 2.4% increase between initial and post anxiety scores for children in the control condition who simply waited for their appointment. These findings justified subsequent trials, now underway, assessing pre and post appointment measures for both dentist and patient outcomes.

THE LACK OF AN INTEGRATED MODEL

In their review, Sondell and Söderfeldt (1997) noted that dentistry lacked an integrated model specifically for dentist-patient communication. Nearly two decades on, this lack does not appear to have been addressed, although Newton and colleagues at Kings College, London have been working towards that goal (see Travess et al. 2004). Schou (2000) suggested a role for the behavioural sciences, including health psychology, to explore interactions between dentist and patient, similar to behavioural medicine.

Effective communication with a patient-centred approach is supported by a growing literature base, outlined by Mead and Bower (2000). Laine and Davidoff (1996) suggested this evolving in Western medicine. Valuing patient meanings and interpretations, sharing decision-making, building relationships, practitioners' self-awareness of their own biases and limitations (gender bias for example, see Smith and Dundes, 2008), and working from a bio-psycho-social model of health, all seem immediately relevant to improved patient-centred communication. Little et al. (2001) and Gould et al. (2001) offered a more grounded framework of this, reporting it as described by medical patients as communication and partnership; personal relationships; health promotion; a positive approach; and interest in the effect on life. When power imbalances between patient and practitioner are managed effectively, practitioners may provide a supportive environment that facilitates the communicative goals laid out by Bensing and Verhaak (2004) with patient disclosure of past experiences, and their preferences for the current appointment.

CONCLUSION: A PROPOSED PATIENT-CENTRED COMMUNICATION MODEL.

Communication training has been promoted as one way to counter dental patient anxiety and dental neglect, and other difficulties between dentists and their patients. In this paper we have sought to show that when empathy is perceived by the patient—when the patient has reason to believe the dentist is concerned about how they feel and what strategies they would prefer to use if they need treatment, patient anxiety can be reduced. There can be a cascade of benefits for this in patient satisfaction, successful negotiated treatment plans and adherence with such plans (see Kim et al. 2004) and reduced dentist' occupational stress.

Specific training in developing empathy may be especially relevant for dentists who treat anxious young patients, to stem the early development of lifetime dental anxiety. The literature reviewed, while selective, suggested more emphasis should be placed on communication skills in dental school curricula. However, combining skills training with the increased use of pre-visit questionnaires may create an expectancy of empathy

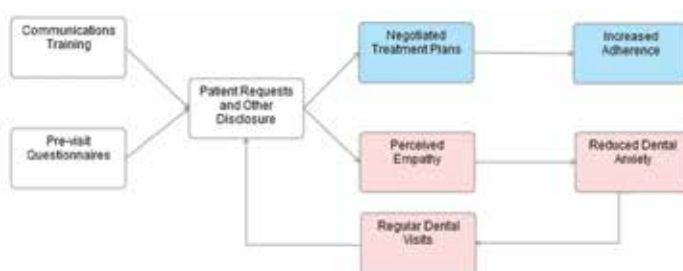


Figure 1. Integrated model for improved dentist-patient communications

amongst dentally anxious patients and empathy has been shown to reverse the conditioning of patients' negative prior experiences. To this end, the Dental Jungle project would endorse an integrated model to summarise opportunities to improve dentist-patient communication, and treatment outcomes, in a patient-centred approach to appointment management.

The integrated model for improved dentist-patient communication (Jones and Huggins, 2011) is intended as a constructive summary, following the review of empathy in medicine and dentistry. Although Ong et al. (1990) argued against delineating affective and instrumental communication, the importance of affective communication, and especially the communication of empathy, has been detailed to reinforce the importance of building longer-term relationships between dentist and patient. As reported by Fox (2013) in the American Dental Association News, "emotional intelligence trumps IQ in dentist-patient relationship" (www.ada.org/news/8623.aspx). In Figure 1, affective communication forms a reciprocal loop in the lower right-hand quadrant, between Patient Requests and Other Disclosure; Perceived Empathy, Reduced Dental Anxiety and Regular Dental Visits. This loop facilitates repeated treatment outcomes via Negotiated Treatment Plans and Increased Adherence. Increased adherence reflects the shared commitment to diagnoses and dental care plans resolved between dentist and patient that are possible with empathetic communication. The end result would predictably be satisfaction for both the patient and their dentists.

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