Model of the dentist–patient consultation in a clinic specializing in the treatment of dental phobic patients: a qualitative study

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Thirty semi-structured interviews were conducted with 5 dentists (3 male and 2 female) after first and second consultations with 15 newly enrolled dental phobic patients (2 male and 13 female) in a clinic specializing in the treatment of odontophobia. Analysis of the transcribed interviews was influenced by the principles of grounded theory. Five concepts/higher-order categories were grounded in the data: 1 core category: 'Relatedness, based on affective resonance and concordant roles' and 4 additional higher-order categories: 'the dental phobic patient's emotions'; 'the patient's verbal and non-verbal cues'; 'the dentist's role as a clinician: professional interpersonal skills'; and 'the dentist's role as a fellow-being: general interpersonal skills'. The model developed describes the dynamics of the dentist–patient interaction and has a theoretical application. □ *Dentist–patient consultation; dental phobia; grounded theory; qualitative method*

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Reviews of the literature on communication between patient and provider (1–3) show that the interpersonal aspects of the patient–dentist interaction have received increasing attention during recent years. Several reports (e.g., 4–6) have discussed the components of doctors' interviewing skills and the characteristics of the provider–patient encounter. Enelow et al. (7) stressed that (a) the medical interview is concerned with both the biological and the psychosocial aspects of the patient's story; (b) diagnoses are based partly on the interview; and that (c) active listening, skilful interviewing and empathy result in a more effective doctor–patient relationship.

Furthermore, research indicates that dentists' behavior has an impact on patient anxiety. Baron et al. (8) reported the more smiling, explaining procedures, adjusting one's vocabulary and tone of voice patients perceived when interacting with a dentist, the less stress they experienced. Rouse & Hamilton (9) confirmed the above findings, pointing out that dentists need to critically examine their interpersonal style, since an abrupt style tends to increase patient anxiety.

The above findings are central when consultation with dental phobic patients is studied, since these patients are often more sensitive to the dentist's behavior than average patients (e.g., 10, 11). In addition, research on dental phobic populations has indicated that the initial consultation with dental phobic patients reduces their self-perceived dental fear as measured by dental anxiety scales (12).

In the present study we further investigated the components of the dentist–patient interaction in consultations with first visit dental phobic patients in order to expand the 'patient-centered dental consultation' model described in our parallel study (10). We explore the characteristics of interpersonal skills used by dentists to meet the needs of dental phobic patients, and how dentists perceive the emotional characteristics of dental phobic patients in the dentist–patient encounter at the fear clinic studied. We believe that the identification of various aspects of the dentist–patient encounter may lead to a better understanding of those dentist and patient attributes that may interact during the initial contact and may also play a significant role in the reduction of patient anxiety.

Method

Procedure and subjects

The patients for the present study were selected from the waiting list at the specialized dental fear clinic. When first contacted for an appointment, they were informed about the project over the telephone and were given a choice about participation. All patients invited to participate did so. When they arrived at the clinic they were asked once again to confirm their intention to participate. If they agreed (all did), they were further informed about the study, i.e., that it would investigate how dentists interact with patients and that their first 2 consultations with the dentist would be video-recorded. The investigated patients agreed to participate and understood that the video-recorded material was to be used only for research purposes.

The project was approved by the Human Ethics

Committee of the Medical and Odontological Faculties at Göteborg University.

Five dentists (3 male, aged 44, 50 and 50 years, professional experience 18, 23 and 24 years and 2 female dentists, age 40 and 42 years, experience 14 and 17 years) at the Oral Medicine Clinic, Department of Oral Diagnosis, Faculty of Odontology, Göteborg University participated in the study. Interviews were conducted after first consultations with 15 newly enrolled dental phobic patients: 13 women (ages ranging from 24 to 58 years, mean = 31 years) and 2 men (aged 25 and 26 years). In addition, 15 interviews were conducted after the second consultation with the same patients, i.e. 30 interviews were conducted altogether. Every (five) dentist consulted 3 patients on two occasions (in consultations I and II). The patients' educational background varied: 2 had been to primary school, 12 had been to sixth form college and 1 had received higher education.

Patients' dental anxiety was assessed by the Corah Dental Anxiety Scale (DAS, 12) before the first consultation. Patients with a DAS score of over 14, and those who were unable to receive conventional dental care—because of their fear—were included in the study. Patients with a DAS score of over 14 are regarded as fearful.

Instrument

Dental Anxiety Scale

Dental Anxiety Scale was a direct translation into Swedish of the original scale (12). It measures reactions to 4 imagined dental treatment situations. For each situation there is a scale from calm 1) to terrified 5), thus producing a total for all situations ranging from 4 to 20. The scale in previous research has been shown to be valid and reliable (e.g., 13).

Dentist–patient consultations

Consultations were conducted in accordance with normal routines and lasted between 20 and 40 min. Consultations with newly enrolled dental phobic patients consisted of a thorough intake interview (1st visit) and a detailed therapy discussion (2nd visit). The consultations were video-recorded using two 8 mm camcorders. One camcorder was placed opposite the dentist (on the left side of the dental chair) and the other in a window recess in front of the patient. This allowed a full coverage video follow-up of the complete visit. The effect of the camcorders on the participants' behavior was marginal, according to their own reports.

The intake interview was aimed at exploring: (i) when and how dental phobia developed/occurred; (ii) past and present dental care experiences and behavior; (iii) whether the patient had had other kinds of phobia(s) or psychological problems, (iv) other medical or psychosocial problems; or (v) expectations and motivation for treatment.

The therapy discussion after X-rays were taken was aimed to: (i) provide support and advice about how to cope with dental phobia; and, after assessing oral status, further explore and confirm (ii) the patient's expectations and wishes regarding his/her dental fear treatment; and (iii) discuss and agree on the treatment plan for the phobia and dental needs.

Semi-structured interview

Semi-structured interviews conducted with dentists shortly (within 24 h) after the first and second consultations lasted about an hour. They were audio-recorded with a cassette recorder and a table microphone. The dentists had been informed about the aim of this research project and about guaranteed confidentiality.

During the first 20 min the dentists were asked about their own thoughts, feelings and actions at the beginning, in the middle and at the end of the consultation, and what parallel thoughts, feelings and actions they had observed or deduced in their patients. Afterwards, the interviewer (first author) and the dentist reviewed most (80–90%) of the video-recorded consultation on a 14″ TV + VCR. The videotape was stopped when either the interviewer or the dentist had any comment or question regarding the dentist–patient interaction. All comments were audio-recorded for analysis. By interviewing the same dentist several times, and asking similar questions, the dentists had the opportunity to develop their previous answers. Interviews were conducted from September 1998 until February 1999.

Qualitative analysis of data, based on Grounded Theory

We approached the issue from a qualitative perspective with the aim of generating a theoretical model. Grounded Theory (14) has been widely used in healthcare research (e.g., 15, 16) and in studies of doctor–patient communication (e.g., 17, 18), but to our knowledge not yet in dental research, except our parallel study (10).

The same interview data were analyzed in this and in our parallel study (10). When analyzing the data it became evident that there were too many categories in the material for them to be presented in one and the same study. The characteristics of the categories also gave us the motivation to arrange and report them in 2 separate studies. In our parallel study (10), concepts regarding patient-centered dentistry were included, while in the present study concepts related to the dynamics of the dentist–patient interaction were included, with a focus on the interpersonal skills dentists use to meet the needs of anxious dental phobic patients. The 2 studies are closely related, but the theoretical models developed are distinct from each other.

Analysis of the data began by underlining words and/or phrases the contents of which were substantial. Substantial

codes were arranged in several groups, i.e. categories dependent on the similarity and differences among them (i.e., open coding). Some categories were closely related and built higher-order categories on a higher level of abstraction. The higher-order category, 'the dental phobic patient's emotions' for instance, included categories such as nervousness and tension. The process of investigating the relationship among categories is called axial coding.

Interview questions were influenced and adapted to the emerging concepts in order to deepen the categories identified. Moreover, the relationship between categories was investigated and a theoretical model was designed, continuously refined, and developed depending on the new concepts emerging from further data. In the process of 'selective coding' the researcher integrated categories to build a theoretical framework.

The final step was the labeling of the core category. The characteristic of the core category is that it refers to the central phenomenon or problem investigated and has the highest level of abstraction in the model. The core category, 'relatedness based on affective resonance and concordant roles', is a central concept that permeates all higher-order categories. The method of constant comparison (14), i.e., the researcher compares the emerging categories to the raw data, is of key importance, since closeness to the raw data even on the level of the highest abstraction must be maintained.

Finally, when two-thirds of all interviews were completed the participants were asked if they could confirm and/or refine the emerging concepts. They were also encouraged to illustrate the identified concepts in their video-recorded interactions as they occurred *in vivo* (not reported here). The last-mentioned strategy to validate the theoretical model is important because the researcher must make sure that the developed model 'makes sense' to the participants, i.e., has relevance.

Validity and reliability

Development of the theoretical model in Grounded Theory is an inductive process. Validation of the developed theory, however, is based on constant comparison. A theoretical model is valid if it is grounded in the data. A theoretical model is well grounded, i.e. has credibility and trustworthiness, if the identified concepts and categories emerge consistently and are illustrated/validated in quotations from the interviews.

Reliability was reached when similar relationships between phenomena repeatedly emerged from our data. The choice of labels was influenced to some extent by pre-existing concepts in the literature.

The interviews were transcribed verbatim by an experienced transcriptionist and were checked by the first author. Data collection, coding and analyses were conducted simultaneously and continued until saturation of information was reached (600 transcribed A4 pages). Saturation of information was reached when substantially new concepts or categories could not be identified in the data in regard to the aim of this study. A further sign of saturation was when additional data did not contribute significantly to the understanding of the emerged concepts and categories. In sum, data were collected until a satisfactory model could be developed.

Furthermore, no major differences were found in the interview material regarding the nature of the emerging concepts or categories between the two interview sessions, i.e., between the interviews after the first consultation and the interviews after the second. By contrast, concepts and categories which were identified during the interviews after the first consultation were confirmed, refined, and developed during the interviews after the second consultation.

Results

Five higher-order categories were identified in the data. The core category, 'Relatedness, based on affective resonance and concordant roles', is an abstract concept that explains how the higher-order categories interrelate. The four additional higher-order categories were grounded in the substantive codes: 'the dental phobic patient's emotions'; 'the patient's verbal and non-verbal cues'; 'the dentist's role as a clinician: professional interpersonal skills'; and 'the dentist's role as a fellow-being: general interpersonal skills' were identified. Each identified higher-order category is composed of several categories which are all interrelated, as illustrated in Fig. 1.

Relatedness based on affective resonance and concordant roles

The core category, 'relatedness based on affective resonance and concordant roles', is a theoretical concept (see Fig. 1). Relatedness is an abstract interpersonal platform that the dentist works on in order to reach, encourage and influence the patient. This relatedness, which may be seen as a treatment alliance, is created and maintained by both the dentist and the patient in their encounter. To establish and maintain the dentist–patient relatedness, it is required that the dentist is sensitive to the patient's communication or lack of communication of emotions and has the skill to adjust his/her role and affective style accordingly. The dentist's affective style and his/her roles are complementary and interrelated, as discussed and illustrated by the examples below.

The dentist's role as a clinician and as a fellow-being: professional versus general interpersonal skills

Two aspects of a dentist's professional role were identified and were most often closely interrelated and integrated in the dentists' behavior towards the patient. One was his/her 'objective', professional role as a clinician, i.e., the dentist's professional interpersonal skills, including listening actively to the patient by encoding (i.e.,

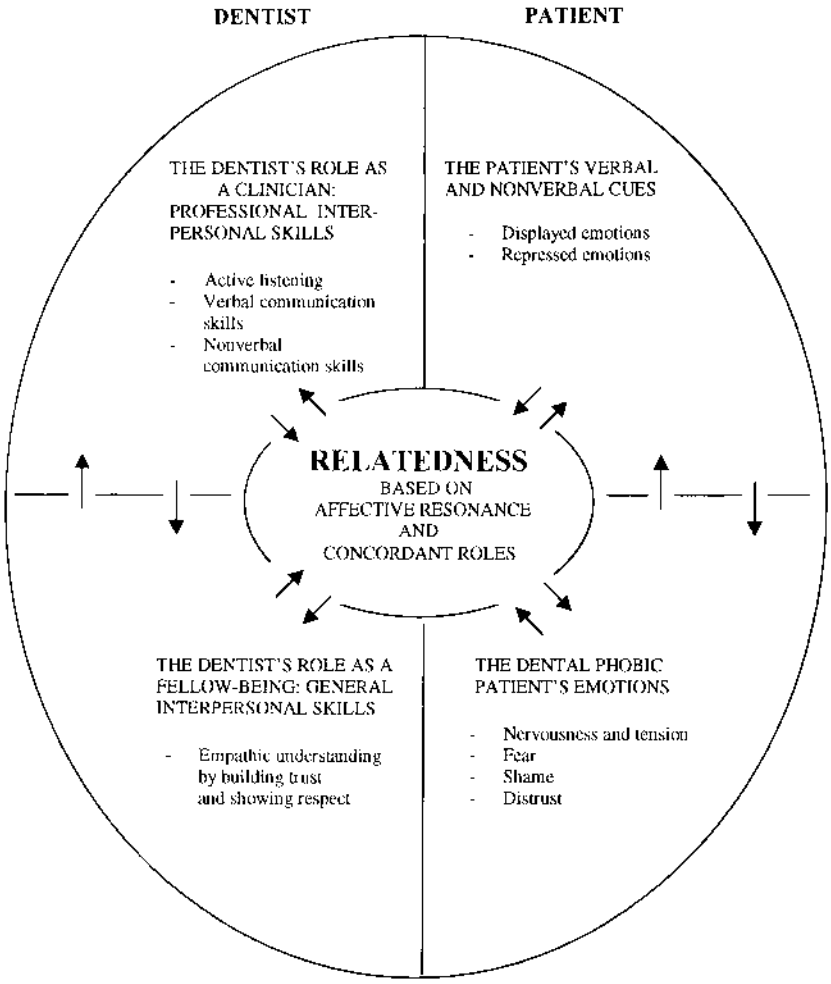

Fig. 1. Dynamics of the dentist–patient interaction.

sending) verbal and non-verbal cues, and decoding (i.e., perceiving) the patient's verbal and non-verbal cues. The second was the dentist's 'subjective' role in a fellow-being role, i.e., the dentist's general interpersonal skills, including empathy and understanding.

In the case of the patients, several verbal and non-verbal cues were identified which patients use to display or repress/conceal their emotions (see below). They conceal or repress their true emotions by using strategies such as putting on a facade. The dentist's role is concordant and affective style 'resonate' with the patients if it is adjusted to the patient's needs and the situation. If the patient is crying and/or ashamed, for example, then the dentist's empathic understanding role, and his/her affective utterances associated with it, are more appropriate than his/her professional role as a clinician, i.e., his/her interest in facts.

The dentist's role as a fellow-being assumes an ability to handle and reduce patients' distress, such as shame, in a way that is appropriate for each individual, as a participant put it: "The dentist's strategy for handling the patient's feeling of shame depends on the way the patient expresses his/her experience. If the patient tries to joke about his/her shame then the dentist simply confirms the patient's feelings by saying that: I understand that you are embarrassed about this. If the patient's comments indicate a depressed mood, then the dentist may put his hand on the patient's arm, saying that I understand that this feels hard for you . . . but you should not be ashamed of your dental fear and its consequences for your teeth."

Dental phobic patients' emotions

The patient's verbal and non-verbal cues

Displayed emotions. Patients use both verbal and non-verbal cues to display/express their emotions (see Table 1). Verbal cues are perceived and interpreted by dentists in the following ways: "The patient's way of telling his/her story reveals his/her fear and anxiety"; "It is difficult for

some patients to get started and tell his/her story, or answer questions because of their anxiety"; "Some patients have a one-sided story without nuances e.g., blame their former dentist".

Non-verbal cues also reveal the distress and discomfort patients experience in the dental chair: "The patient does not [dare to] lean back in the dental chair"; "The patient refuses to open his/her mouth"; "The patient cries and shows his/her emotions openly".

Dentists also reported that the patients who express/disclose their emotions are more willing to discuss their dental phobia than patients who are reserved. If the patient cannot or does not want to face his/her dental phobia, this, too, may reduce possibilities of treating dental phobia: "Patients who bury their heads in the sand often seek quick and easy solutions, i.e. general anesthesia", and "Some patients are willing to discuss the dental treatment, but are still not able to discuss solutions to the problem of their dental fear".

Repressed emotions. Dentists pointed out that sometimes patients do not want to or cannot express/reveal their anxiety and distress to the dentist. Some patients are good at hiding their dental fear and consequently may deceive their dentists, which can result in misunderstanding: "Those patients who do not signal fear are the most difficult cases to handle"; "They do not say anything, only stare at the floor or answer in single words"; "It is only during treatment that the dentist may realize how frightened the patient is". In some cases, even in the specialized dental fear clinic, patients do not express verbally how anxious or frightened they are at the dentist: "A patient who is really afraid may try to conceal some of his/her emotions". In addition, dentists often saw a patient's tendency to repress or conceal his/her emotions, i.e. their dental fear, as a strategy for handling their distress: "Some patients can talk freely and easily about their fear, but this intellectualization may be the patient's strategy for repressing his/her dental fear".

Patients use several strategies for handling their emotions. One is to put on a 'joking/humorous facade'. As a dentist put it: "Fearful patients may hide behind the facade of making jokes or laughing, thereby minimizing their dental fear".

Dentists tend to interpret a humorous facade as a sign of shame. This is especially true in the case of male patients or patients with high social status: "Expressing the word 'fear' to some male patients can be very difficult". "The patient does not use his/her body language and pretends that he/she is calm—only the sweating reveals his/her anxiety".

Consequently, the dentist interprets the limited non-verbal cues as a sign of controlled distress: "The patient's facade, that he/she pretends to be calm, covers his/her true feelings and there is a lot that the dentist must explore under this façade."

Other patients may try to minimize their dental fear by keeping it at a distance: "Some patients do not, cannot or do not want to discuss their dental anxiety in detail"; or "They are not or pretend not to be really interested in the reasons for their dental anxiety". "The patient is focused on his/her teeth [i.e., discusses the dental treatment] not the treatment of dental anxiety".

A third type of strategy patients may use is to (unconsciously) play the role of a victim: "When a dental phobic patient has never succeeded in dealing with his/her dental anxiety, it can result in an attitude such as: 'I am [i.e.,my dental fear is] hopeless'". Consequently, dentists must always be alert to possible misjudgment of the patient: "Even if the patient seems to be a tough and talkative person—under the surface he/she may be vulnerable".

Table 1. Examples of categories and substantive codes included in the higher-order category. 'The dental phobic patient's emotions'

Nervousness and tension
The patient is nervous
The patient's body language reveals how tense he/she is
The patient is inhibited and reserved
Some patients feel ill at ease even at the thought of sitting in the dental chair
Fear
The patient's fear may be very great
The patient is so afraid that she cannot accompany her children when they visit a dentist
The patient is aware of his/her dental fear and inner feelings
The patient does not want to hear a word about working on his/her dental fear
Shame
The patient does not want the dentist to even take a look in his/her mouth
The patient is very ashamed of what his/her teeth look like
Shame is one of the most evident reasons why patients feel ill at ease when they visit the dentist
Some patients feel ashamed and foolish because they do not dare to go to the dentist
Distrust
The patient had been informed that she would only be interviewed during the first consultation, but she did not believe this
Many patients dislike dentists just as much as they fear them and the treatment
In the phobic patient's view, a dentist is someone terrifying, someone who is threatening and dangerous
The patient urgently wants to control the situation
The patient wants to check out the dentist—the kind of person he/she is

Table 2. Examples of categories and substantive codes included in the higher-order category. 'The dentist's role as a clinician: professional interpersonal skills'

Active listening
The aim of an anamnestic interview is to listen and let the patient tell his/her story in full detail
The dentist listens attentively to the patient's own ideas and opinions
The dentist concentrates on the patient, listens and tries to interview in a structured way
It is very important that the patient feels that the dentist is listening
The dentist tries to pinpoint the essence/find the key in the patient's story so that the patient does not hold back any important information
Experience shows that if the dentist succeeds in listening attentively to the patient then the treatment can be performed much more easily
The dentist develops a special ability to 'read between the lines', i.e. to hear what the patient says and comprehend what he/she really means
Verbal communication skills
The dentist explores and discusses the patient's reason for visiting the clinic, i.e. his/her dental anxiety
The dentist is not directive and lets the patient explain the reason for his/her dental anxiety without debating it
When the dentist asks questions he/she tries to use examples to make it easier for the patient to answer
The dentist who asks personal questions about the patient's psychosocial situation, family, work, etc.
The dentist is careful to react to the feeling behind what the patient says, and comments or asks additional questions to respond to the feelings
The anamnestic interview is flexible, i.e., the question areas are the same for every patient, but the phrasing and order of asking the questions can differ depending on the situation and the patient
Non-verbal communication skills
The dentist shows with his/her body language that he/she is listening and trying to understand the patient
The dentist takes time to listen to the patient
The dentist seeks and tries to keep eye contact during the entire interview
The dentist's communication style is cautious because he/she does not want to interrupt what the patient is saying
The dentist can establish contact simply by being silent
Before the dentist begins the examination, he/she makes sure that the patient has finished talking
Every clue/sign that is unique is noted

The dentist's role as a clinician: professional interpersonal skills

Dentists reported that they have to master various interpersonal skills and strategies in order to be able to handle patients' negative emotions in a professional way. First of all, as a fundamental condition, the importance of establishing a good initial contact with the patient was emphasized: "Contact with the patient is essential"; "Contact is the platform from which the dentist works". According to our participants the quality of contact is different from case to case, but a successful meeting has some common characteristics: "Contact is good if it is true and honest and not false or imitated"; "Contact and the initial relationship, based on empathic understanding, warmth and respect, that you establish during the initial consultations can in itself reduce fear a lot".

To establish contact requires several interpersonal skills that were grouped under two categories: the dentist's professional interpersonal skills (Table 2) and the dentist's general interpersonal skills (Table 3). Under the higher-order category 'the dentist's role as a clinician, professional interpersonal skills' the categories were labelled as: 'active listening' and 'verbal and non-verbal communication skills'. Concerning the higher-order category of 'the dentist's role as a fellow-being, general interpersonal skills' the category was labelled as: 'empathic understanding by building trust and showing respect'.

Which of the dentist's roles dominates at a certain moment and how the roles shift depends on the interview

Table 3. Examples of a category and its substantive codes included in the higher-order category. 'The dentist's role as a fellow-being: general interpersonal skills'

Empathic understanding by building trust and showing respect
The dentist must first recognize the patient's negative emotions
The dentist must indicate to the patient that his/her negative emotions are accepted
By communicating acceptance the patient's negative emotions may be reduced
The dentist does not accuse the patient if he/she cancels the appointment
As you told me (previously) there are many severely damaged teeth, but there are also quite a few that are possible to treat and use for rehabilitation. So it is not as bad as you may think
The dentist can never afford to show surprise or negative reactions (e.g., disgust) about the poor condition of the patient's teeth
It is important to really understand the patient and show empathy
When the patient realizes that you are also sensitive to their emotions it is very beneficial for building trust

situation. Dentists reported that the anamnestic interview should be and often is flexible, despite its distinct structure, which is mainly determined by the dentist's routines: "One can look at history taking as a tree-trunk where you have an essence/a core which is important to explore . . . then, the tree-trunk has naturally a whole foliage where you can find out other things. Even if you know the essence well after many years of practice the dentist feels the curiosity to explore it further, since all other things originate from this essence"; "The dentist must concentrate on the patient when he/she asks questions and must listen attentively".

Dentists added, however, that they must be careful to gather certain standard information: "The basic structure of the anamnestic interview is the same, there are only small deviations from it. At the same time, every consultation is different. The order of question areas can vary, for instance, depending on the situation and the choice of the patient. Therefore, the dentist's routines should not make him/her presumptuous. Routines secure a kind of confidence, but they also involve a risk since the dentist is seldom surprised."

The dentist's role as a fellow-being: general interpersonal skills

Data analysis revealed that the dentist's roles, 'as a clinician' and 'as a fellow-being' shift during the course of the consultation depending on the situation and the reactions of the patient. Hence, during the consultation the dentist in his role as a clinician is mainly listening and sending and interpreting verbal and non-verbal cues. At the same time he/she must be prepared to shift to his/her role as a fellow-being if the situation so requires and vice versa. When the dentist, for instance, tries to reduce a patient's distress, such as shame or fear, he/she confirms the patient's experiences in such a way that the patient feels that his/her problems are common and understandable. As a dentist commented on this empathic way of understanding of the patient's problem: "If the dentist notices that the patient is ashamed then the dentist comforts him/her by saying that other patients react in the same way, i.e. they are also ashamed and may feel terrible which is understandable. Considering the patient's fear this is nothing that the dentist or others should be judgmental about."

Shifting roles means, in other words, that one of the roles dominates the other at a certain moment but the two roles are always complementary and interrelated. When the dentist is empathic he/she must, at the same time, listen attentively to the patient and interpret his/her verbal and non-verbal cues. Shifting roles therefore refers to the dentist's ability to adjust his/her role and affective style to the patient's needs and situation simultaneously. This refers to what we called in the core category affective resonance and concordant roles.

Besides empathic understanding, honesty and respect were also emphasized by dentists. As the participants expressed it: "It is important to show openness by asking questions and creating a friendly atmosphere . . . at the same time showing by your actions that you really are interested in the patient"; "This means real concentration and listening, and maintaining eye contact". Honesty, naturally, should be mutual, i.e. the patient must also be honest toward the dentist.

Honest contact can be characterized by the following statements: "The dentist and patient come straight to the point and do not beat about the bush"; "The patient asks and answers questions clearly and the patient seems to understand all right". If the encounter is not honest, then it is more difficult to establish contact: "The dentist cannot get the hang of the patient."

It is important for the dentist to be able to establish eye contact with the patient. Often, however, this condition is not met: "The patient can avoid eye contact by simply staring at the floor or some object. Then the patient is neither attentive nor reflective."

Finally, it should be noted that when the dentist has collected a satisfying amount of information, usually during the first half of the anamnestic interview, he/she becomes verbally more active and informs the patient about the services of the clinic, including the treatment alternatives the clinic has to offer. Although this phase of the consultation is important as a platform for future therapy discussions and decisions regarding treatment, it is beyond the scope of this paper. Patients DAS scores ranged from 14 to 20 ($M = 17.0$, $SD = 2.1$).

Discussion

Our main finding is summarized in Fig. 1, which illustrates the dynamics of the dentist–patient interaction. The application of the model can be explained by an example. One of the negative emotions dental phobic patients can experience is shame. Shame can be either displayed/expressed or repressed by the patient depending on its intensity and the patient's personality. If the patient clearly expresses to the dentist that he/she is ashamed because of the bad condition of his/her teeth or/and the fact that he/she did not visit the dentist in time, then the dentist, by actively listening to the patient, scanning his/her verbal and non-verbal cues, adopts his/her role as clinician. However, if the patient represses his/her shame, by avoiding the subject or not revealing his/her true emotions, then the dentist must rely more on his/her general interpersonal skills i.e., his/her empathic understanding, since it is not clear from the outset which emotions the patient is experiencing. In this case, the dentist must change approach, must be more sensitive and empathic—at the same time also being able to *communicate* empathy—in order to be able to build trust and interview the patient. If the patient does not sense that the dentist is empathic by showing acceptance, respect and can be trusted, then the dentist's chance of being able to perform

an adequate anamnestic interview is minimal. This is why it is the dentist's role as fellow-being that dominates this kind of situation.

In addition, a relationship is established between dentist and patient if the dentist's behavior is appropriate and adjusted to the patient's needs and the requirements of the situation. The model developed describes the interpersonal processes in the dental consultation, but it does not serve as a practical guide as to how the dentist should behave or react in a particular situation. The model, including the identified categories, has a theoretical implication that fits in with previous theoretical concepts, as discussed below.

An almost identical model to our finding is the *functional public-personal equilibrium* (19). The authors argued that doctors have a socially constructed professional role on a public level that includes diagnosis and patient management. In addition, doctors have a personal level in the clinical transaction that refers to their disposition towards patients. Personal and public levels of the clinical transaction constantly interact and the two roles, if not harmonious, undermine one another. In a successful clinical interaction the two levels are concordant. The doctor's skills in monitoring and regulating the two levels depend on his/her deployment of *intrinsic counselling skills*.

In a recent study (20), Martin Buber's philosophy of dialogue and his concept of 'healing through meeting' (21) was used to illustrate how the caregiver's roles shift during a consultation. Abramovitch et al. (20) suggested that the physician may successfully combine the personal (I-You) and impersonal (I-It) aspects of medicine in three stages: (i) An initial *Personal Meeting* stage, which initiates the doctor–patient relationship and involves mutual confirmation; (ii) an *Examination* stage, which requires a shift from a personal to an impersonal style of interaction; (iii) an *Integration Through Dialogue* or '*Healing Through Meeting*' stage, which involves the integration of the impersonal medical data into the ongoing dialogue between doctor and patient, as a basis for shared decision-making. Buber's concept of 'becoming', which is a method for expanding systematic thinking and deepening *empathic accuracy* (22), emphasizes the importance of the caregiver's empathic attunement.

In regard to the dentist's professional interpersonal skills and role as a clinician, an extensive body of research suggests that the healthcare provider should listen intently to the patient's concerns, learn from the patient, teach the patient, and be open and non-judgmental in order to understand the patient's complaints and illness (5, 23).

Moreover, this study emphasizes that verbal and non-verbal communication skills include on the one hand sending non-verbal cues to the patient (encoding), and, on the other, 'reading' or perceiving the patient's non-verbal cues (decoding), (see Table 2 for concrete examples, e.g., 24–26).

Concerning the dentist's general interpersonal skills and role as a fellow-being, it is important to note that although researchers define empathy in various ways (e.g., 27, 28) they agree that the empathic doctor–patient relation consists of: eliciting feelings, paraphrasing and reflecting, using silence, listening to what the patient is saying, but also to what he/she is unable to say, encouragement and non-verbal communication.

Theoretically, verbal and non-verbal communication skills and empathy are related concepts and skills (29). According to Buda (30, p. 329): "Empathy basically means a deeper and a more *intensive participation* in the communication process than usual, an *increased perception*, and an attempt to *consciously interpret* the cues of the non-verbal and the meta-messages" (italics and translation by the first author).

In addition, several studies support our finding that dental phobic patients experience negative emotions in dentistry, such as nervousness, tension, shame, and distrust (e.g., 11, 13, 31). A patient's tendency to display or repress his/her emotions and non-verbal cues is of special interest. Eye contact and facial expression are fairly reliable indicators of the quality of contact and is regarded as one of the primary mediums for communication of affect (32) and to play an important role in empathic processes (33). In research on deception, Noller (34) found that a focus on facial cues is reduced if deception is involved or expected. In other words, when patients avoid eye contact it can be difficult for the dentist to correctly interpret the patient's signals. Therefore, lack of sufficient information from verbal and non-verbal cues can be one of the reasons why dentists evaluate such a contact as unsatisfying or false.

Our choice of methodological approach was based on several factors. First, our objective was to generate a theoretical model of the dentist–patient encounter based on in-depth interviews. Our hypothesis was that this dental encounter, because of its unique setting (i.e., fearful patients and dentists specialized in the treatment of odontophobia), was an ideal platform from which to investigate the characteristics of this kind of dental care. Secondly, because of the small number of respondents available, it would not have been possible to study various consultation styles. Thirdly, little research (35) has previously been done using the principles of Grounded Theory in any dental setting.

This study and the model developed have limitations. Neither the sample of dentists studied nor the clinic where the consultations took place is representative and generalizations should be made with caution. In the normal dental practice there is no time for a longer discussion with patients and the average patient does not present an emotional problem as patients visiting the dental fear clinic do.

In future, research should focus on video-recorded interactions by exploring how the identified categories and processes can be observed and further validated. The mechanism of the dentist's way of adjusting his/her behavior and interpersonal style to the patient and particular situations should also be further investigated.

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