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ORIGINAL ARTICLE

Social Representations of Children in Relation to the Image of the Dentist

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Abstract

Objective: To identify the social representations of children in relation to the image of the dentist. **Material and Methods:** This is a descriptive cross-sectional study with quantitative-qualitative approach. The sample consisted of 80 children of both sexes aged 7-10 years attended at a clinic-school of a university in eastern Minas Gerais, Brazil. For data collection, the Test of Free Words Association (TALP) was used, with the word "dentist" as its inducing theme. The four items included in the research instrument were: 1) evoke up to five words or expressions related to the dentist; 2) to order each of them numerically, with number one being the most important and number five being the least important; 3) to conceptualize the one elected as number one; and 4) to justify the reason for that choice. The EVOC software was used to carry out quantitative analyses and the Analysis of Content of Bardin for qualitative analyses. **Results:** The words that composed the central nucleus of social representations were "tooth", "pain", "brushing" and "treats". This grouping of ideas points to the following conceptual formulation: "The dentist is someone who 'brushes' and 'treats' teeth, but sometimes performs procedures that cause 'pain'. The categories abstracted from participants' discourse were "oral health", "personal characteristics of the dentist" and "child-dentist interaction". **Conclusion:** Children presented predominantly positive image regarding the dentist.

Keywords: Behavioral Sciences; Psychology, Child; Dentist-Patient Relations.

Introduction

The study of the social representations of children in relation to the dentist allows understanding the behaviors presented in dental treatments and, consequently, to develop approaches more appropriate to this group. This is because emotions and behaviors in relation to objects of the world are guided by the way the subject perceives and attributes meanings to them [1].

Children generally appreciate personal characteristics and professional skills of the dentist. In addition, they value good relationship with this professional, emphasizing humanized care and the security transmitted by the explanation of procedures as positive points [2-5]. These indicators are clues for the consolidation of a practice that considers childhood imagery and its influence on the relationship between dentist and patient as a primary factor in the success of treatment.

The dental experience of many people is marked by technical-curative procedures that generate pain or discomfort, which leads to feelings of fear and anxiety, contributing to the maintenance of non-collaborative treatment standards [6-13]. Thus, the approach of the child patient becomes a challenge, leading to the development of appropriate reception and bond strategies, contextualized for the child's reality to enhance preventive action. The use of appropriate behavioral approaches, such as tell-show-do, positive reinforcement, desensitization and use of models aim to decrease the child's fear and anxiety during dental treatment [14]. The successful use of these different approaches contributes for the child to better accept treatment, with higher adherence, consequently promoting a less stressful environment for the dental team and treatment with resolution [15].

In this perspective, the aim of this study was to identify social representations in relation to the image of the dentist in children attending the clinic-school of a university in eastern Minas Gerais, seeking to broaden the understanding of the child's universe and to support the construction of more successful practices in Pediatric Dentistry. To a certain extent, this perspective is novel in the field of Dentistry because it considers the patient's perception as an important data in the construction of the problem. In addition, the methodology used to survey these perceptions was little used in this field, a fact that is observable in the lack of studies on representations of children in relation to the image of the dentist.

Material and Methods

Design and Sample

This is a cross-sectional case study with quantitative-qualitative approach. The sample consisted of patients attending the Pediatric Dentistry Clinic of the Dentistry School – *Vale do Rio Doce* University, located in the city of Governador Valadares, Minas Gerais, Brazil. This clinic receives children between four and twelve years of age, with capacity of four hundred patients per semester. The service is based on a comprehensive health care model, with progressive incorporation of promotion, prevention, treatment and rehabilitation, with reception actions seeking humanization of relations, as emphasized by the Pedagogical Project of the Dentistry Course [16].

The inclusion criteria were age between seven and ten years, regardless of sex, regularly enrolled in the Elementary School network, being in dental treatment during the first half of 2012 requiring both curative and preventive procedures. Exclusion criteria included motor, sensory and cognitive developmental problems; communication problems; syndromes; such as hospitalizations or prolonged medical treatments (more than 6 months) or more complex systemic problems during the research. Children were evaluated by the research collaborating psychologist in order to assure the evaluation of these criteria.

For sample composition, the clinic-school provided a list with registration number, name and telephone number of all children aged 7-10 years who sought dental treatment in the Pediatric Dentistry clinics of the university in the first half of 2012. Based on this list, children were divided into groups according to age and sex and were randomly selected, by simple draw, as survey participants. The sample consisted of eighty children aged 7-10 years, twenty of each age group, equally distributed between sexes.

Data Collection

Initially, a telephone contact was made with the intention of presenting the research to parents / guardians, inviting them to attend the place where data collection was performed and to obtain consent for the child's participation in the study. If any parent / guardian refused to participate, another child was randomly assigned to replace this loss.

Before beginning procedures with the child patient at scheduled date and time, the research objectives and methodology were explained again to parents / guardians. Only after the free and informed consent form was signed by parents / guardians, the child was invited to participate in the study and, in case of refusal; another child that met the inclusion criteria was selected to compose the sample.

After obtaining consent, the child was taken to a properly furnished, comfortable, air-conditioned and well-lit room belonging to the Department of Applied Psychology of the same university. The use of this space was purposely determined, with a view to promoting ideal conditions for an individual interview, avoiding external interference.

Interviews were conducted by an undergraduate Psychology scientific initiation student, duly trained and calibrated, recorded using a portable recorder, which later had their content literally transcribed. The average time taken in this procedure was sixty minutes, considering the rapport establishment, that is, a link that allows effective communication between interviewer and interviewee.

The data collection instrument consisted of a semi-structured interview script. The elaboration of the script was based on the Test of Free Words Association (TALP), systematized by Abric [17]. TALP, also known as Central Nucleus Theory or Central System, is a projective technique that seeks to identify implicit contents in the construction of the study object and allows reaching representations in relation to people, professions, religions, ideas, concepts, etc. The

technique was based on the Theory of Social Representations (TRS), from which it is understood that representations would be a form of knowledge socially elaborated and shared in relation to a specific objective.

The four items included in the research instrument were: 1) evoke up to five words or expressions related to the dentist; 2) to order each of them numerically, with number one being the most important and number five being the least important; 3) to conceptualize the one elected as number one; and 4) to justify the reason for that choice.

Data Analysis

Data were quantitatively analyzed through the *Ensemble de Programmes Permettant L'analyse des Évocations* (EVOC) software. This software contains applications of statistical analysis of frequency and the average order of evocations, specially designed for studies on Social Representations. Data processing allowed identifying elements belonging to four quadrants, that is, groups of words that constitute the central and peripheral systems of the social representations of children in relation to the image of the dentist.

Qualitative data were analyzed through the Content Analysis technique proposed by Bardin [18]. Content Analysis is a method that aims to analyze mass communications and stereotyped perceptions raised through association techniques. This method has been widely used in the fields of Psychology and Sociology, proving to be useful in the investigation of meanings attributed to certain objects or words. Its use in the field of Dentistry can bring interesting perspectives to the patient's understanding and, consequently, to the adoption of therapeutic strategies and management of the relationship with his/her reality.

The Content Analysis procedure initially involves raising a hypothesis, performing a floating reading of the selected material, and organizing it by creating categories and subcategories. In the present study, the speech sample considered for analysis were speeches of participants in relation to word number one evoked from TALP. Speech categories were consensually established by the team of researchers, which was composed of psychologist, pediatric dentist and dentist, after several rounds of material reading, organization of speeches by units of meaning and discussions about the words that would represent each one of these units.

Ethical Aspects

All normative specifications of Resolution 466/2012 of the Brazilian National Health Council that regulates research involving human beings were met. Respondents were given anonymity, privacy and the right to withdraw from participating in any stage of the research. Parents / guardians of participants signed the Free and Informed Consent Form authorizing children's participation in the research. The project was previously submitted to the Ethics Research Committee of the *Cruzeiro do Sul* University and approved under Protocol CE / UCS -168/2011.

Results

Quantitative Analysis

With the use of TALP, three hundred and thirty evocations regarding the image of the dentist were collected. For better data processing, some categories were established by grouping words with similar meanings. Thus, terms such as "treats," "cares" and "repairs", for example, were all considered in the category "treats", thus obtaining a total of fifty-seven categories.

This set of words was cataloged through EVOC software with the combination of frequency (F) and mean evocation order (OME), allowing identifying elements of the central nucleus (1st quadrant) and peripheral (2nd, 3rd, and 4th quadrants) of representations of children regarding the image of the dentist (Table 1).

Table 1. Social representations of children in relation to the image of the dentist.

1st Quadrant			2nd Quadrant		
Elements of the Central Nucleus	F ≥8	OME <2.6	Elements of the Peripheral System	F ≥8	OME 2.6
Tooth	14	1.643	Cheerful	20	2.700
Pain	08	2.125	Appliance	09	2.889
Brushing	16	1.938	Good	25	2.880
Treats	52	2.288	Nice	32	2.813
			Bad	11	3.364
			Cheers	10	2.700
			Smile	08	3.000
3rd Quadrant			**4th Quadrant**		
Peripheral System	F <8	OME <2.6	Peripheral System	F <8	OME ≥2.6
Friend	06	1.833	Mouth	04	2.750
Confidence	04	1.250	Pretty	07	3.143
Consultation	04	2.500	Caries	06	2.667
			Affectionate	04	4.000
			Instrumentals	04	4.250
			Fear	07	3.000
			High-rolling motor	06	2.667
			Great	06	3.167
			Quiet	05	3.000

Elements "tooth", "pain", "brushing" and "treats" constituted the central nucleus of social representations of the group studied in relation to the image of the dentist. This group of ideas points to the following conceptual formulation: "The dentist is someone who 'brushes' and 'treats' teeth, but sometimes performs procedures that cause “pain".

Qualitative Analysis

From Content Analysis [15], the meanings and justifications for the choice of evocations considered as the most important were grouped into speech categories. Three categories were identified: (1) Oral health; (2) Personal characteristics of the dentist and (3) Child-dentist interaction.

Category 1 - Oral Health

"Oral health" category presented speeches that showed aspects of tooth care, such as preventive (brushing) and curative actions (removal of carious tissue, restoration, anesthesia, tooth

extraction and correction with the use of orthodontic appliance). Children emphasized the importance of brushing for oral health maintenance, pleasant breath, beautiful smile and self-esteem. The following speech fragments elucidate this understanding:

> *He removes it and then we do not feel tooth pain any more, getting rid of that caries that causes pain (female, age 7).*
>
> *Pick up the brush, put paste and brush the teeth. Otherwise, teeth get rotten, old, dirty, disgusting. When people ... we will smile at people with ugly smile, with bad breath (female, 8 years).*
>
> *Taking care of the teeth. The dentist takes care of people's teeth, removes cavities. It is very important because otherwise our smile turns ugly (female, 10 years).*
>
> *Because dentist leaves people with beautiful teeth. What if one has the teeth all messed up? Then, take panoramic radiography, he does what he has to do, study, then you receive dental appliances to straight them up, because nobody can have ugly teeth. This is what the dentist does (male, 9 years old).*

Category 2 - Personal Characteristics of the Dentist

The "personal characteristics of the dentist" category is related to value manifestations in relation to this professional. Predominantly positive perception was observed due to the attribution of desirable personal characteristics such as: nice, educated, calm, trustworthy, courageous, friend, fun and cool. Some illustrative speech fragments of this category are:

> *A nice person is a person who treats people well (female, 8 years old).*
>
> *He is fun and makes people laugh (female, 8 years old).*
>
> *Because if he was not a calm person, he could do something wrong in our teeth and it could be something bad (male, age 9).*

Category 3 - Child-Dentist Interaction

Finally, the "child-dentist interaction" category refers to the child's feelings towards the dentist and to the dental situation in a more general way. Children emphasized aspects related to approaches performed by the dentist, which tend or not to generate feelings of safety in the professional and in determined procedures possibly causative of pain or discomfort. The following speech fragments illustrate this situation:

> *Some dentists think that it is all about taking a look and performing the treatment, then, the person on the chair screams, but he doesn't listens and keeps going on (male, 9 years old).*
>
> *The dentist does nothing; he just looks at your mouth. Sometimes he puts the fingernail and uses the instrument to try to remove the caries. Sometimes that's all he does. Sometimes he plays, talks some things with us, we laugh and have fun. That's why I like the dentist; the dentist is nice (female, 10 years old).*

Discussion

The child's perception of the dentist influences his or her reaction and adherence to dental treatment. When the child recognizes the dentist as a professional who knows oral problems and

who explains the procedures to be performed, most of the times the child accepts treatment in a friendly and confident way. Consequently, the child adheres better to dental treatment, even when it demands uncomfortable procedures.

In the present study, most children immediately associated the image of the dentist with brushing, revealing that this should be a routine activity, necessary for adequate oral health, pleasant breath, adequate feeding capacity and beautiful smile. Children participants of this study also had positive perception regarding the image of the dentist. Even identifying them with aspects of invasive treatments, such as removing dental caries, children understand that this professional helps them to have healthy teeth and better oral health condition. Reports have shown that children value the presence of their teeth, both to feed, chew and to have beautiful smile, without oral problems.

It is noteworthy that a small number of children reported fear in relation to the dentist. Most children have positive feelings towards this professional, emphasizing personal characteristics such as friendship, attention, calmness and smartness. Similar results have been observed in studies that show the valorization of personal characteristics and professional skills of the dentist by children, with expressions referring to the interpersonal relationship, namely: sympathy, being able to respect emotions and providing explanations regarding the treatment that is being performed [4,10,15,19-21].

However, some children reported negative experiences with certain procedures and equipment. Invasive procedures, such as anesthesia and tooth extraction, and dental instruments, such as syringe, carpule and high / low rotation motor, can generate negative emotions, including fear and anxiety. These emotions may lead to undesirable behavior patterns such as the unmarking of appointments and even denial of dental treatment [13,21-28].

Studies have shown that negative perceptions regarding the image of the dentist are usually not related to the person, but rather to anxiety about the instrumentation or procedure used during curative treatments, as well as to previous pain experiences [5,7,20,23,28,29].

Children reported feeling safer when they receive attention and explanations from professionals. For this reason, the attitude of the dentist is essential to create or maintain positive interaction. The use of strategies that minimize negative emotional manifestations enables the professional to perform dental treatment more effectively. Assertive behaviors of the dentist such as understanding the child's emotional reactions and explanations regarding dental treatment contribute to the establishment of relationship based on trust. Thus, the chances of the child patient exhibiting cooperative behavior and adhering to treatment increase, even when they undergo some fearful procedure that potentially cause pain or discomfort. On the other hand, behaviors characteristic of inadequate management, for example coercion and denial of the child's feelings, increase fear reactions and, consequently, lead to non-collaborative behaviors to treatment [7,8,11,28,30].

Fear can generate stressful situations for both child and dentist, which tends to result in dental treatment irregularities. Since fear and anxiety may be present in dental treatment, it would be interesting for every child to know the dentist in a situation of low potential for pain, involving

oral health education techniques, with preventive and humanized approach. This type of measure allows the child to have a positive experience, so that the child identifies the dentist as a trustworthy person and feels more secure when he / she has to undergo some invasive procedure [3,8,20,22,31-34].

The interest in oral health among children has been growing over time, since it may impact quality of life on physical, social and psychological aspects [19,35]. For this reason, much has been discussed about the need to develop preventive approach based on models of comprehensive care, humanized care and health promotion [3,6,35,36]. Looking to overcome the biomedical model of attention to oral diseases, the National Curricular Guidelines of Dentistry courses recommend the formation of generalist and humanist dentists with critical and reflexive view to work at all levels of health care, based on technical and scientific rigor in a comprehensive approach to the individual [37].

In this sense, the National Oral Health Policy proposes a cross-sectional perspective of oral health based on care lines (child health, adolescent health, adult health and elderly health). The development of actions in the perspective of oral health care is guided by several principles, such as universality, completeness and equity, and also aims at receiving the patient, considering the individual in his / her biopsychosocial integrality [38].

The predominantly positive perception presented by children of this research is related to knowledge and practices in oral health, as well as the approach of the dentist and aspects of the child patient relationship. These results corroborate the fact that the clinic-school service is guided by careful approach through educational actions aimed at health promotion and humanized treatment. It should be emphasized that care is based on a model of full health attention, as emphasized by the Pedagogical Project of the Dentistry Course of *Vale do Rio Doce* University [16].

The dentist should be aware that the contents of the child's imaginary in relation to his / her figure and to the dental environment can directly and definitively influence the process of child's adherence to treatment. Adherence or non-adherence to treatment can significantly impact the child's behavior.

In addition, the dentist should also know the life and family contexts of the child patient and understand the child's universe in the dental environment. It is up to the professional to help the child to face and overcome his / her fears, because repeated exposure to threatening situations raises the level of anxiety, causing defense mechanisms to aggravate. The neutralization of such mechanisms requires an empathic, comprehensive and, above all, encouraging attitude. This is the biggest challenge of professionals who work with the child patient.

The small sample is a limitation of the present study, but as it was a case study, we tried to follow the maximum number of cases recommended in the different age groups. In addition, the sample was representative of patients assisted at the Pediatric Dentistry Clinic of the Dentistry School – *Vale do Rio Doce* University. Thus, the results cannot be extrapolated to other locations. As strong points, it can be affirmed that oral health is already valued by the child patient.

Conclusion

Children presented predominantly positive image in relation to the dentist, which is expressed in social representations about tooth, pain, brushing and treatment. This set of social representations allows us understanding that children, in general, perceive the importance of this professional for the maintenance of their oral health, although pain experiences are related to the contact with the dentist.

In the speeches of children, it was evident how much they value the personal attributes of the dentist and the treatment he performs. They emphasized technical aspects that generate confidence such as explaining procedures to be performed. This result points to the importance of strategically thinking about the approach of the child patient in order to minimize emotional and behavioral manifestations that would impair treatment.

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