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PERCEPTION OF CHILDREN'S CAREGIVERS ON NON-ATTENDANCE TO DENTAL APPOITNMENTS IN PUBLIC ORAL HEALTH CARE SYSTEM

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ABSTRACT

Objective: Understand the reasons of caregivers for no-show of under-fives to dental treatment in the public health system. **Method:** The qualitative methodology was used with a sample of caregivers of children who failed to attend scheduled appointment, totaling 18 participants. Semi-structured interviews were conducted, then recorded, transcribed, separated in themes and categorized for later content analysis. **Results:** The study found that caregivers are often the mothers, who in average have two children and a family monthly income of a minimum wage. Statements showed that although aware that children need dental treatment, these mothers struggle to take them to appointments for lack of free time at work. Other reasons include low parental knowledge of oral health; forgetting appointments, as theinterval between scheduling and the actual appointment is too long; child feeling unwell on the appointment date; and lack of another person to take the child to the Healthcare Unit in the mother's absence. **Conclusion:** It is important to include caregiver counseling when planning oral health care strategies for children. Besides, changing the way how visits are scheduled, such as issuing reminders as visit dates approach or having alternative working hours, could benefit patients' use of this service.

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INTRODUCTION

Over the last years, with the implementation of the Unified Health System and the National Oral Health Policy,the offer of dental treatment in Brazil has progressed. The public system offers primary dental care both in the Family Health Strategy, with household visits by community healthcare agents, and in Basic Health Units (UBS), and secondary care in Dental Specialty Centers (Brazil, 2011). Despite this progress, caries index among five-year-olds increased (Brazil, 2012). Researches show that a number of parents do not take their children to scheduled appointments (Mathu-Muju, 2014 and Simons, 2014). Not even the free service is a guaranty of attendance (Lapidos, 2016). This event, referred to as "no-show" in the literature, is observed both in dental and general health care (Parikh, 2010; Kaplan-Lewis, 2013; Molfenter, 2013; Norris, 2012; Machado, 2015; Samuels, 2015; Davies, 2016 and Chariatte, 2008). These no-shows have negative system organization consequences, as patients who do not show not only deny the service to themselves, but prevent other patients from using it, in addition to causing economic impacts, due to expenses with human resources and reduced productivity (Lapidos, 2016). A research conducted in Switzerland found that patients who miss an appointment are most likely to miss the next appointment (Chariatte, 2008). An American study suggests that children who miss a pediatric dental appointment are precisely those with highest caries scores (Casaverde, 2007). Other studies concluded that caregiver adherence to dental care appointments is a determining factor in children's oral health maintenance, as those who failed to attend their appointments had greater caries experiences, higher caries activity levels and an increased need of restorative and preventive dental care when compared to children who attended the appointments (Wang, 2009; Wigen, 2009 and Badri, 2014). Study of no-show rates has received some prominence in general medicine, but in other areas, such as dental care, its focus is limited (Blinkhorn, 2000). Knowing the reasons for a primary healthcare no-show is a considerable step to try to reduce events that result in

health service use disparities (Kaplan-Lewis, 2013). The lack of management solutions regarding patients' no-show reflects the lack of studies on the causes of this behavior in complex psychosocial scenarios (Lapidos, 2016). Some authors emphasize the importance of using qualitative method in public health research, for it provides a more detailed knowledge for definition of problems, hypotheses and evaluations (Blinkhorn, 2000). The notion brought from the Humanities, which is not to study the phenomenon itself, but understand its individual or collective meaning, is used in the context of qualitative method applied to health care. It is thus indispensable to understand what the phenomena of disease and life in general represent to the population (Benner, 1994). This study aims to understand the reasons that cause infant patients to miss primary dental care appointments and possible aspects related to this phenomenon.

MATERIALS AND METHODS

This study, conducted in Belo Horizonte, capital of the state of Minas Gerais, in Brazil, uses an exploratory research with a qualitative approach. The city of Belo Horizonte has nearly 3 million inhabitants, a primary healthcare system with 147 UBSs distributed geographically in areas of the nine administrative regions of the city. Nine UBSs, one from each region of the city, were randomly chosen. A convenience sampling method was used. The person in charge of the dental service of each UBS was requested to suggest at least two patients who had missed scheduled appointments between the months of May and September of 2016.These children had been examined at school and identified as in need of treatment. Therefore, appointments were scheduled. Criteria for inclusion were: parent or guardian of a child who missed a primary health care appointment in the municipal public system, resident of area covered by the UBS and patient aged 5 or less. Individuals without telephone for contact or who refused to participate in the study were excluded from the sample. In this case, another caregiver from the same area was suggested. The preparation of a semi-structured interview script was an attempt to meet the objectives of the study in a flexible context, allowing incorporation of new questions, if appropriate, respecting the singularity and the subjectivities of the individuals and giving meaning to their experiences. The script, formulated from a bibliography review, included the following questions: socioeconomic context of the families of the patients; caregiver perceptions in relation to their and child's oral health; access issues and actions required for using the service; caregiver perceptions in relation to their and the child's dental experience; and the reason for the no-show (Table 1).

The script was drafted and tested in interviews with two caregivers, which were not included in the main study. There has been no modification to the tested script. All interviews were conducted by one interviewer. Caregivers were contacted via telephone, when the interview was scheduled for the date most convenient for each. The interview was preferably conducted at the residence of each interviewee. One person refused; in this case, the interview was conducted at the reception of the UBS. Interviews lasted approximately 20 minutes. The statements were recorded in audio and later transcribed. The material was then read exhaustively, separated by themes and organized into categories by four researchers, who then proceeded to content analysis, according to Benner (Benner, 1994).

Phenomenological interpretation assumptions were used. According to them, through careful and explicit interpretative analysis, one seeks to explore the meanings attributed by individuals in their experiences with the environment, to explore and elucidate the extent of the problem investigated (Smith, 2008). This research accepted the notion of perception as interviewees' ability to learn, identify and understand certain phenomenon (Turato, 2005). The notion of access, in turn, was used as the *"Factor that intermediates the relationship between demand and entry into the health service"* (Travassos, 2012). This research was submitted to and approved by the Research Ethics Committee of the Federal University of Minas Gerais (UFMG). To ensure interviewees remained anonymous, they have been identified by the letter "E" followed by the interview number, e.g., the first interviewee has been identified as E1 and so on.

RESULTS

Eighteen caregivers, 2 from each administrative region of Belo Horizonte, participated in this study. In the first set of data, this study sought to learn more about the profiles of caregivers. It has been identified that caregivers are predominantly women, usually mothers with two children and a family monthly income of a minimum wage (Table 2). In content analysis, 4 main topics emerged, corresponding to the meaning units of the interviews: caregiver's self-perception of oral health, caregiver's perception in relation child's oral health, access to the service and reason for the no-show.

Caregiver's self-perception of oral health: Most caregivers rated their oral health as*"poor"*. Some interviewees initially declare their oral health is *"good"*, but revealed a complaint, a weakness or a deficient oral health, as stated by E11:

> *"Right now I think only need cleaning...I don't know because I haven't been to the dentist in over a year".*
> The social implications arising from poor front teeth aesthetics were reported as a disadvantage by a participant: "*I want to get a job and I don't have my front teeth, you know? So it's complicated. Our appearance counts a lot*" (E2).
> It has been observed that fear and trauma related to dental treatment are emotions that often emerge as the scenarios of experiences incorporated to dental treatment:
> **"***I told the dentist it hurt. She said I was being too fussy, that it didn't hurt, and I suffered a lot "* (E10),
> *"Going to the dentist is never good. It's always annoying"* (E7).

Caregiver's perception of child's oral health: As regards to caregiver's awareness of children's oral health, it was clear that they understand the need for dental treatment:

> *"(The teeth) are not good"*(E12),
> *"It's horrible, he's got holes in his teeth"* (E14).
> It was found that caregivers are concerned about the oral health of children:
> *"If you say it's for my children's health, I'll do it right away*" (E2).
> One of the interviewees took responsibility:
> *"My son...I made a lot of mistakes with at the beginning. It wasn't lack of brushing, but [...], because I was at home with him for one year. We went through some difficult times, [...] Then when I started working, he would point at*

something, he wanted, I would give it to him, [...] Sandwich cookie was like that. Everything you found at home, candy…Every time I arrived at my mom's home, my father would give him candy, so from 3 to 4 years old he would have candy, candy, candy all the time [...] Then I saw what I did to him, the poor child" (E10).

Some reports described children as "quiet" during dental treatment, E6 adds: *"He's quiet. He behaves well".*

Reason for the no-show

Unwell child: Child being sick was one of the most cited causes for missing dentist appointment:

"He was very feverish." (E1),
"He was sick, vomiting" (E4),
"She had a bronchitis crisis, coughing and using the inhaler" (E7).

Table 1. Interview guide

1.	What is the school level of the child' s father and mother?
2.	How many children does the couple have?
3.	What is the family's average monthly income?
4.	Who takes care of the child on a daily basis?
5.	How would you rate your own oral health?
6.	What is your dental experience like?
7.	How would rate the child's oral health?
8.	What was the reason that caused the child to be submitted to dental care at the basic health unit?
9.	How was the access to the dental visit at the occasion?
10.	Do you remember what the child was being treated for?
11.	How was the child's last visit at the basic healthcare unit?
12.	How did the child behave at that occasion?
13.	Why did the child miss the dental visit?

Table 2. Socioeconomic status of caregivers of 5-year-olds who missed scheduled visits. Belo Horizonte, Minas Gerais, Brazil, 2016

Identification	Caregiver	Mother's education	Father's education	Monthly income (minimum wage)	Number of children
E1	Sister	Incomplete elementary school	Complete high school	2	6
E2	Mother	Incomplete elementary school	Incomplete elementary school	1	5
E3	Grandmother	Does not remember	Incomplete high school	1.5	3
E4	Mother	Incomplete high school	Complete high school	1	2
E5	Mother	Complete high school	Complete high school	Does not have fixed income	1
E6	Mother	Incomplete elementary school	Incomplete elementary school	Did not answer	3
E7	Father	Incomplete elementary school	Complete high school	1	2
E8	Grandmother	Incomplete high school	Incomplete high school	1	3
E9	Mother	Complete high school	Incomplete high school	1	2
E10	Mother	Complete high school	Complete high school	1.5	2
E11	Aunt	Complete elementary school	Incomplete elementary school	2	3
E12	Father	Complete high school	Complete high school	2.5	2
E13	Mother	Incomplete high school	Incomplete elementary school	1	1
E14	Uncle	Incomplete elementary school	Incomplete elementary school	1	2
E15	Mother	Incomplete elementary school	Unknown	1.5	1
E16	Mother	Complete high school	Incomplete elementary school	1	2
E17	Grandmother	Incomplete elementary school	Complete high school	1.5	2
E18	Mother	Complete high school	Complete high school	1.5	1

Access to the service: Service-related positives have been reported, such as easy geographical access and good physical facilities. In addition, interviewees' perception of the dental care received is also positive:

"The staff is very attentive. His dentist is adorable. I like her a lot" (E10),
"The dentist at the clinic here is very good" (E16).

Other interviewees mentioned other strengths of the dental care organization:

"There was no bureaucracy, no problem at all [...] it was actually pretty quick" (E10),
"When the child is born, he/she is already sent to the health center. If you arrive in pain, they will see you. You just have to wait who was in the line before, but it's easy" (E14).

However, negative access-related aspects have been demonstrated, such as the interval between scheduling and the actual appointment, lack of assistance in some treatments and lack of dental material on some occasions.

"It takes a long time, because you go today and schedule an appointment for next month" (E5),
"Every time, on the day of the appointment, there is no material" (E2).

Lack of free time at work: Other caregivers attributed the lack of free time at work and not having anyone take the child to the consultation as determining factors for missing the appointment:

"Then I started working. We can't skip work to go to the dentist. They don't understand, you know?" (E14).

Forgetting: One aspect that stood out was forgetting of the appointment, admitted by several interviewees: *"Three days later I saw the paper, I just forgot it"* (E8). The form how the child's first appointment was scheduled is worthy of note. Some caregivers received a letter from the UBS at home informing the day and time of the appointment after the dental surgeon's visit at the child's school.

Miscommunication: Moreover, it was possible to perceive the miscommunication between the UBS and the caregiver:

"But how do we go to an appointment? [...] If it's for the health of my children, I'll do it straight away" (E2).

Others have even shown surprise:

"There was no appointment. Nobody told me anything about an appointment. I didn't miss it." (E5),

"But they didn't call us. I don't know of anything. If they had called, I would have taken him, because he has got a rotten tooth in his mouth" (E6).

DISCUSSION

Studies suggest that appointment-keeping barriers are multifactorial and related to social issues, not only forgetfulness. According to Lapidos *et al.* (2016) barriers that influence non-attendance may be structural, psychological or related to low oral health literacy. These factors were also observed in this study. Most interviewees in this study were mothers. It is essential to highlight the role of mothers in the dental care of their children, since food education and oral hygiene are habits directly transmitted by them (Akpabio, 2008). Caregivers rated as *"poor"* their own oral health. It is known that this condition is determined by multiple factors, however, it can be linked to poor oral health literacy, i.e., the individual does not understand the importance of oral health, has a deficient self-care, believes in dental fatalism (loss), does not understand instructions or necessity of paying regular visits to the dentist (Lapidos, 2016 and Vann, 2013). This is worrying, considering that the oral health practices and habits of the family, especially the mothers', affect the way their children deal with their oral health and, consequently, the habits incorporated by them (Akpabio, 2008 and Castilho, 2013). At least one mother related the appearance of her teeth to her difficulty in finding a job. In fact, dental loss can cause social damages to individuals, such as dissatisfaction with their appearance, impairment in interpersonal acceptance and difficult access to labor market (Vargas, 2005).

Several caregivers reported they relate fear to dental treatments. Some studies show that the dental experience is, for some people, a situation that involves fear, anxiety and stress, and may even act as an inhibitory factor to dental treatment, being a significant cause for non-attendance to dental appointments at various stages of life (Ismail, 2001). This phobia could be responsible for causing both treatment aversion and neglect of oral health (Casaverde, 2007). Although there is evidence that parents' fear of toothache is a predictor of children's anxiety as regards to dental treatment (Akpabio, 2008), in this study, caregivers often expressed their own fear of dental treatment, but not the child's as an evident effect and factorfor not attendinga dental appointment. Although studies have shown that individuals who do not consider the health problem sufficiently important are more predisposed to not attending consultations (Samuels, 2015 and Gregory, 2007), in this study caregivers acknowledged the existence of oral health problems in children and the need for dental treatment, but in spite of that, failed to attend the appointments. This behavior may be attributed to mothers' low oral health literacy (Wang, 2009), because children's "poor" oral health seems to have low interference in the life of the individuals involved. Only in one testimony of this study, responsibility for the child's precarious oral situation was related to inappropriate maternal care. This reality must be taken into account by health professionals because parental counseling actions should be planned along with children oral health care strategies.

Non-attendance may also be related to the presence of resistance factors or accessibility barriers to services, thus representing an expression of social inequities in health care (AlBarakati, 2009). In this research, it was observed that accessibility to the services is satisfactory and not a determinant factor for non-attendance. When analyzing the speech, one can notice that users seem resigned to the lack of certain procedures in the system, or lack of material that makes it impossible to clinically complete the treatments. The results of this study therefore point to low population empowerment, which directly affects one of the pillars of health promotion (WHO, 1986). In some actions in the Unified Health System dentists go to schools and examine children. Those who present treatment needs bring a letter to their parents requesting them to go to a UBS to schedule an appointment. In addition to some parents failing to attend, appointments are often scheduled for distant dates. The interval between scheduling and the actual appointment, as observed in other studies (Simons, 2015 and Davies, 2016), was a reason for non-attendance, since the long waiting time may contribute to forgetting the appointment. Norris *et al.* (Norris, 2012), warned against the paradox: the scheduling system designed to ensure full utilization of slots increases the chance of underutilization. An important tool to reduce patients' non-attendance as a result of forgetting the appointment could be aservice of prior remindersvia telephone for confirmation or sending automatic messages, as demonstrated in some studies (Parikh, 2010 and Christensen, 2001). Among the reasons listed for no-show was the child feeling ill on the day of the appointment. A similar condition was reported in a study conducted in England (Simons, 2015).

Another justification mentioned was the lack of free time at work, since working hours at the UBS are similar to the work hours of the majority of users. In this case, it would be important for the health service to consider, when scheduling, the most appropriate time for the caregiver to take the child for treatment. It was observed in this study, following the model recommended by Lapidos *et al.* (Lapidos, 2016), that structural problems such as: inflexible working hours, scheduling first dental appointment on a very distant date, and possible the low oral health literacy of caregivers were important barriers for children's non-attendance to dental appointments. It was also found that mothers' are often resigned in the sense of solving problems regarding the dental treatment of their children, both for improvement of the scheduling system and for acquisition of the necessary material for the public service. This fact is, once again, related to the low empowerment of this population. Since the problems analyzed in this study are not limited to this group, it is not improper to assume that the perceptions exposed by the population studied may be common to other groups of individuals. Future studies should investigate which strategies are most effective to avoid no-shows. In the literature, few studies using qualitative methodology are aimed at understanding non-attendance to scheduled dental appointments.

Conclusion

This research allowed us to understand and analyze relevant aspects, singularities and characteristics that permeate the subjectivity of the proposed objective. It is imperative that caregivers in the family nucleus incorporate in their routines simple habits and attitudes to develop awareness about the importance of oral health prevention and promotion, resulting in benefits for children. On the part of the professionals, it is important toarticulate of caregiver counseling to children's oral health strategies, not losing sight, also, of the importance of empoweringthis population. In this sense, changes to appointment-scheduling process are equally advisable, with

appointment reminders at convenient moments, considering caregivers' routines. In addition to that, interventions aimed at reducing the interval between scheduling and the actual appointment are likely to reduce no-show rates.

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