

Research

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Caregivers Perceptions about Discussing Children's Weight: A Pilot Study

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ABSTRACT

Background: Childhood obesity poses serious health problems, many of which have life-long repercussions. A major gap in current knowledge relates to caregivers perceptions about the role of the dental team in the provision of weight-related counseling. Our aim was to address this question by obtaining in-depth information regarding caregiver's perceptions about the role of the pediatric dental team in healthy weight-related counseling.

Methods: This qualitative investigation used semi-structured, face-to-face, 45-minute interviews of English-speaking caregivers of children ages 4-6 who were receiving routine dental care in a dental school-based clinic. Interviews were transcribed and coded using standardized methodologies for qualitative research. The analytical approach was thematic and iterative, using ATLAS/ti data analysis software. Interviews were conducted until theoretical saturation was obtained.

Results: Theoretical saturation was obtained at 15 interviews, with two central themes emerging. Caregivers were 1) highly receptive to and expected the dental team to provide caries-related nutrition counseling and 2) generally receptive to healthy-weight counseling, while emphasizing that rapport/compassion would be key for effective communication.

Conclusions: Previous investigations have shown that pediatric dentists have concerns that they may offend caregivers by broaching the topic of weight-related counseling. In this pilot study, we found caregivers expressed respect for the dental team's knowledge of weight and valued a compassionate approach in the context of an established rapport. The pediatric dental team has an opportunity to address childhood obesity through routine screening/assessment and the provision of nutrition-related counseling.

KEYWORDS: Obesity; Caregivers; Overweight; Patients.

ABBREVIATIONS: OW/OB: Overweight or Obese; BMI: Body Mass Index; QR: Qualitative Research.

INTRODUCTION

Once seen mostly in adults, obesity now affects children in similar proportions.¹ The United States (US) Centers for Disease Control and Prevention reported recently that the prevalence of childhood obesity has doubled over the past 30 years in children ages 6-11.² Underscoring the seriousness of this epidemic is this recent stark fact: more than one in three children and adolescents in the US is Overweight or Obese (OW/OB).³ These collective statistics have prompted Healthy People 2020 to rank childhood obesity reduction as one of our nations' highest health priorities.⁴

OW/OB children pose myriad health problems, many with life-long repercussions including high blood pressure, diabetes, and heart disease.⁵ Additionally, overweight children often have lower self-esteem.⁶ Children who are overweight at a young age are more likely to remain overweight into their adolescent years,⁵ a phenomenon with a potentially dramatic impact on the future of health care costs.⁷

Practice Models for the Inclusion of Weight-Related Counseling in the Dental Setting

In recent years the dental profession has shown a willingness to venture outside the realm of traditional oral health concerns through participation in tobacco cessation counseling and the monitoring of blood pressure.⁸⁻¹⁰ It seems clear that the most efficient and likely dental practice model would be to incorporate healthy weight counseling within the context of preventive dental care and anticipatory guidance. As early as 2005, Glick⁷ advocated that dentists take a role in weight-counseling. For adult dental patients, Hague and co-workers¹¹ suggested that oral health care professionals can easily conduct routine weight screenings at dental visits and detect an unhealthy weight; moreover, research has shown that dentists are interested and willing to discuss obesity in their offices.¹²

Curran and colleagues¹² reported a few potential barriers for dentists. In her survey of 8,000 general and pediatric dentists, she reported dentists' concerns about offending patients (54%) and appearing judgmental (52%). More recently, Lee and colleagues¹³ surveyed 1,779 pediatric dentists, reporting similar potential barriers, including concerns about offending parents/patients (54%), appearing judgmental (53%), and concerns about patients' acceptance of weight-loss advice (47%).¹³

Caregivers Perceptions of Discussing Their Children's Weight in the Dental Setting

Relative to child patients, a major gap in current knowledge relates to the caregivers' perceptions about the role of the dental team in this realm. Understanding these perceptions is an important consideration in the successful introduction of new clinical practice routines because it is difficult to institute practice changes that go against public opinion.¹⁴ Accordingly, the

overarching aim of this investigation was to provide in-depth information on caregivers' opinions about having healthy-weight counseling provided by the dental team. As baseline for comparative data, we also obtained opinions of caregivers' views on the dental team's provision of traditional nutrition counseling for caries prevention. Finally, we examined caregivers' perceptions of the potential role of deploying formally-trained nutritionists in the dental setting.

METHODS AND MATERIALS

Study Design and Inclusion Criteria

We completed semi-structured interviews of caregivers whose children were established patients in the Children's Clinic at the School of Dentistry at the University of North Carolina at Chapel Hill. Our goal was to recruit English-speaking caregivers of children ages 4-6 years.

Caregiver Recruitment and Interview

One investigator (FS) conducted all interviews in a private setting after a thorough explanation of the study and after obtaining consent using documents approved by the UNC-CH Biomedical Review Board. All interviews were audio-recorded and each lasted approximately 45 minutes. At the conclusion of the interview, children's current height and weight were measured. A \$10 gift card was given as a gesture of appreciation for their time/participation.

In qualitative studies, theoretical saturation is defined as informational redundancy among participant interviews.¹⁵ Interviews were conducted until theoretical saturation was reached.

Research Instrument and Interview

The research instrument consisted of a semi-structured interview guide containing open-ended questions developed from a specific topic.¹⁶ The research instrument was developed by the lead investigator PI (FS) under the guidance and with consensus of a research team of collaborators/co-authors using the conceptual framework based on the model of Wu and colleagues.¹⁷ This framework (Figure 1) is an explanatory theory¹⁷ that describes factors such as parental beliefs and perspectives on preventive medications; it provided the categorized areas of interests for this study.

The interview instrument was piloted-tested with caregivers whose children were under routine care in the children's clinic. Afterwards, with the input of the study collaborators, the lead investigator revised and edited the interview guide to consist of more pertinent questions.

Data Collection, Synthesis and Analysis

At the conclusion of each interview, the interviewer

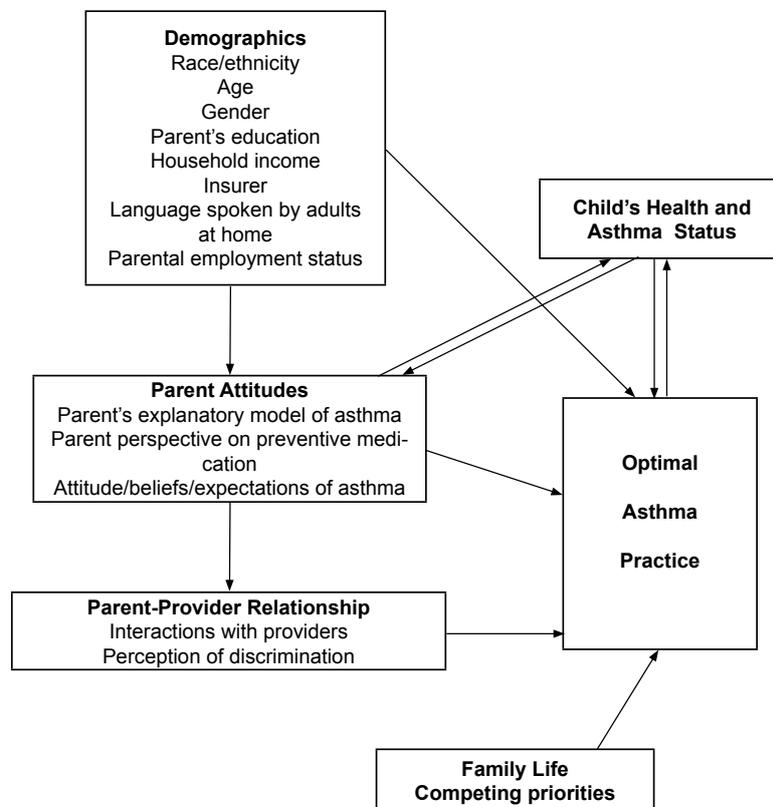


Figure 1: Conceptual framework presented by Wu and co-workers¹⁷ provides factors that influence parental beliefs and perceptions about asthma medications.

(FS) made observational notes derived during the interview session. The audio-recordings of the interviews were transcribed verbatim and then verified for accuracy by concurrently reviewing completed transcripts and listening to recorded interviews. Transcribed interviews were then coded and analyzed using ATLAS.ti data analysis software.

An initial set of 10 codes were created a priori and a total of approximately 40 codes were generated as the data were examined. The codes were organized and defined to create a codebook. Two investigators (JH and FS) independently coded the initial two interviews. Differences in coding were discussed until consensus was reached. All interviews were then coded by the primary investigator (FS) and reviewed by an expert in qualitative research (PM).

Based on the frequency of codes and co-occurrences, major themes were documented.^{18,19} The concepts and themes were categorized using qualitative analysis software ATLAS.ti.¹⁹

RESULTS

Theoretical saturation was reached after 15 participant interviews. Table 1 illustrates the caregiver/child demographics. Four major themes were identified and are elaborated with caregiver quotes in Table 2 and summarized as follows:

Characteristic	No. of participants
Sex	
Male	1
Female	14
Age Range (Years)	
25-34	7
35-44	6
≥45	2
Level of Education	
Less than high school	2
Completed high school	3
Some college	5
Completed College and above	4
No response	1
Child Age Range (Years)	
4	3
5	3
6	9
Body Mass Index BMI (Percentile)	
0-<5 (Underweight)	0
5-<85 (Normal Weight)	11
85-<95 (Overweight)	1
>95 (Obese)	3

Table 1: Caregiver and child characteristics among interview participants.

Theme 1: Caries-related Nutritional Counseling in the Dental Setting

To establish a baseline, we queried the caregivers at some length about diet as related to caries-related nutritional counseling for children. They expressed the view that they “ex-

<p>Theme 1: Caries-related nutritional counseling in the dental setting</p>	<ul style="list-style-type: none"> • <i>“That’s what they’re here for ...if you can’t talk to them (the dentist), then you shouldn’t be visiting them.”</i> • <i>“She gives me information and I feel comfortable talking with her.”</i> • <i>“Oh, absolutely... They explained it at my level and not at the dentist’s level...that really helps a lot.”</i>
<p>Theme 2: Healthy-weight nutritional counseling and discussing children’s weight in the dental setting</p>	<ul style="list-style-type: none"> • <i>“If they’re compassionate and came at me knowing they have my children’s best interest, then I wouldn’t get offended.”</i> • <i>“I think if they’re going in and saying, “Hey, your child’s really fat,” that might be offensive. It depends on their terminology, their approach and tone, that’s what I think. I don’t think it’s really the content, it’s about how they deliver the content.”</i> • <i>“Well, you’ve got to build rapport...you’re going to have a parent come in with a child that’s obviously overweight (that) could be leading to health issues because of the weight...before you have that conversation, you have to have some kind of relationship and rapport with the person. So, maybe not on the first visit or second visit, but somewhere after that...it depends on how comfortable the family is with the doctor.”</i> • <i>“I can see how some people might say well you’re just a dentist. You’re only trained to look at teeth. You’re not trained to look at how heavy my child is, so... I can see how there would be reservations, but I also think that if it’s best for the child, that the dentist should go ahead and bring it up because maybe it was missed (at the physician’s office)...”</i> • <i>“I would always want to be referred to my pediatrician because I would take his word more... than I would a dentist, unless it’s only pertaining to teeth. I think you do have a certain responsibility to report certain things, if you see children are abused, neglected, so I can understand that, so maybe that’s the point of view they’re coming from.”</i>
<p>Theme 3: The role of the nutritionist in the dental setting</p>	<ul style="list-style-type: none"> • <i>“I think you’d find most people would be open to it. I don’t have Medicaid or Medicare. I come here because I don’t have any insurance. So for someone to tell me you need to take your child to the nutritionist, and then I’ll have to pay out of pocket for that, that’s a very costly expense.”</i> • <i>“I wouldn’t see any specialist unless Medicaid would cover it, and I wouldn’t go to... anybody unless the pediatrician referred me to them.”</i> • <i>“Time-wise, I don’t have time, I’m working. And it’s very difficult to get to one appointment, much less try to find somebody new to put into this equation, and it’s just difficult.”</i> • <i>“Just because it would be an extra hour or whatever that I have to schedule and if there was a nutritionist maybe here when I came to the appointment that might be a good thing, but I bet you I wouldn’t make an extra appointment.”</i> • <i>“I think that having a nutritionist at the dental office would be helpful for some families. For us specifically, we have a nutritionist at their pediatrician, so I think that we don’t need it.”</i>
<p>Theme 4: Perceptions of caregivers of overweight/obese children</p>	<ul style="list-style-type: none"> • <i>“It wouldn’t bother me... at all.”</i> • <i>“I will feel good that somebody talked to me about them... if they (the dental team) can help me, it’s good for me to know that I can get help in here or somewhere else”.</i> • <i>“I’m not a person to take offense to anything like that... it’s just looking out for the best of the child...”</i>

Table 2: Thematic areas of caregivers’ responses.

pected” these discussions during a dental visit. Summarizing this theme from Table 2, the caregivers felt that the dental team has a responsibility for caries-related nutritional counseling and felt completely comfortable discussing this dimension.

Theme 2: Healthy-weight Nutritional Counseling and Discussing Children’s Weight in the Dental Setting

Although many caregivers were generally receptive to the idea of discussing their child’s weight in the dental setting, their feelings were tempered by two important concepts that

emerged under this theme: compassion and rapport.

Compassion: Caregivers understood and acknowledged that discussing their child’s weight in the dental setting could be a difficult conversation. Overall, they emphasized the importance of the providers’ having compassion and felt it was best to avoid accusatory remarks/comments that would make the parent or child feel guilty.

Rapport: Caregivers felt establishing rapport with the family was also an important factor when addressing these matters.

They expressed the view that it would not be best to bring up the discussion of weight at the initial visit.

Although most welcomed the discussion of weight with the dental team, a few did not understand why dentists would be concerned about the child's weight; however, these caregivers acknowledged that the child's physician could have overlooked the discussion of weight. A few caregivers expressed a preference for a referral to their pediatrician for more guidance on weight rather than relying solely on the dental team's recommendation.

Theme 3: The Role of Nutritionists in the Dental Setting

Many caregivers were generally open this concept; however, they had concerns about the cost for such services, and some had some anxiety about the time that may be required. Some felt it would be difficult to find time for a separate appointment with a dental office-based nutritionist while others felt that having a nutritionist in the dental office would not be necessary because it is a service that is usually provided by the pediatrician.

Theme 4: Perceptions of Caregivers of Overweight/Obese Children

In planning for this study, we found no data suggesting that caregivers' perceptions would be affected by their children's weight-status; however, many dentists have anecdotally reported this would be a concern; therefore, we examined this question post hoc. As noted in Table 1, four children were Overweight/Obese (OW/OB). We found these caregivers were enthusiastic about discussing their children's weight in the dental setting.

DISCUSSION

This pilot investigation is the first to provide in-depth insights into caregivers' perceptions about discussing their children's weight in the dental setting. Our findings were similar to those reported in the pilot-study by Tavares and colleagues,²⁰ wherein parents and dental professionals offered receptive feedback to weight counseling for their child/adolescent dental patients. In our qualitative descriptive study, caregivers generally

expressed comfort in speaking with the dental team and trusted their opinions pertaining to the overall health of their child; however, they emphasized that providers' compassion and rapport would be essential for caregivers' acceptance. Tseng and colleagues²¹ also suggested that the dental team's communication approach and tone are critical, emphasizing that weight-related conversation should be culturally sensitive and presented in the context of the overall health of the child.²¹

Our results underscore that the key is message delivery. In Table 3, we present helpful language for the dental team to consider as conversation-starters. As one prime example, dental team members can begin conversations by explaining that some children may not visit their physician regularly, and having more periodic weight-related conversations may be helpful in establishing healthier eating habits.

Our findings revealed that caregivers believed it is important to have an established relationship with the provider. They thought addressing their child's weight at the first visit was not an ideal time because such a discussion could be overwhelming for many families, especially when coupled with discussions about caries prevention and future treatment needs.

We found that caregivers would be open to the concept of seeing a nutritionist in the dental setting, acknowledging that this would be an added benefit for the overall health assessment of the child; however, many were apprehensive about the potential expense and the length of the appointment. Families with limited financial resources had more uncertainty about scheduling such an appointment because of the cost, some mentioned that coordinating doctor visits was difficult due to hectic family schedules. This perspective suggests the idea of one-stop shopping for nutrition/dental services could be an attractive option for some.

As early as 2003, the dental office was recommended as a setting for childhood obesity screening.²² For dentists who care for children, many are comfortable with the concept of obtaining heights/weights for monitoring growth and development, establishing safe dosages for local anesthesia, and dosing drug regimens prior to sedation procedures.^{21,23} Once recorded, height and weight can be converted easily and quickly into a

"As a part of our routine preventive visits, we obtain height and weight of children so we'll know how to dose our medications and as well as to monitor growth and development. We've noticed a pattern for an unhealthy weight with for your child. Our team can discuss this with you and offer some suggestions we think you'll like, we can also refer you to your pediatrician to discuss the issue."

"If we can change your child's eating habits now, we could prevent weight and cavity problems in the future."

"Your child may not visit his/her physician as frequently as he/she did when they were younger, as your dentist, I regularly review your child's health status and I would like to address some health related issues."

"Dentists not only care for the teeth, we also monitor the overall health of our patients. We are concerned about your child's weight. At our last appointment we weighed your child and now he/she is at this percentile. We would like to help you with this, or if you'd prefer, we can refer you to your pediatrician for follow-up."

"We have found what your child may eat and how frequently your child eats can cause the development of cavities and an unhealthy weight. We would like to help you with this and offer you options for help."

Table 3: Message delivery suggestions as modified from Tseng et al.²¹

Body Mass Index (BMI) percentile.^{21,23} In 2012, Perrin and colleagues²⁴ found that only 22% of caregivers recalled having been advised about their child's overweight status by a healthcare provider. The dental setting is grounded with many facilitating factors that support healthy-weight screening and counseling and our findings suggest that caregivers are generally receptive to this concept. For these reasons, we urge dentists to assist their medical colleagues by monitoring and identifying those patients who may be OW/OB. Depending on the viewpoint of the caregiver, the dental team can make a referral to a nutritionist or the child's primary physician.

In previous studies, dentists have expressed concern about several potential barriers in this realm^{12,13} and these barriers generally fall into the realm of offending caregivers by discussing potentially embarrassing and sensitive information about their children. We found caregivers receptive to having a discussion regarding their child's weight, but they emphasized the importance of an established doctor-patient relationship and a compassionate, sensitive delivery of the message.

Qualitative Research (QR) provides a more descriptive, in-depth understanding of the event or population studied.¹⁵ Deployed commonly in medicine and nursing, this methodology is used infrequently in dental research, although studies by Mofidi and colleagues,²⁵ Horowitz and colleagues,²⁶ and Isong and colleagues²⁷ offer excellent examples of published dental studies using QR. Reviewed and trumpeted recently in an excellent piece by Edmunds and Brown,²⁸ QR is likely to take on a broader utilization in future dental research.

Although the scope of this study did not permit an exploration of differences in opinions as it pertained to the caregivers' age, ethnicity, educational attainment, gender, race, and socioeconomic status, we were able to generalize the caregivers' opinions and perspectives broadly and our findings are consistent with those of Tavares and colleagues: caregivers are generally receptive to child-related weight counseling in the dental setting.

Our data are limited to caregivers' opinions about children ages 4-6. Exploration of other age groups is an avenue for future research. We focused on younger children because parents generally have more control over the diets and nutrition for younger children.

Our sample of OW/OB children was small, representing 26.6% of our sample. It should be noted that this percentage is less than the representation of OW/OB in the general populations 33.3%.³ While acknowledging this slightly smaller percentage, our findings revealed there was no difference in the response of caregivers of OW/OB children; indeed, in this study the latter welcomed the discussion of weight-related counseling

Qualitative studies such as this one are highly dependent on communication. For this reason, our study was limited to English-speaking caregivers because our investigators were

not bilingual nor were our study instruments available in non-English versions. We recognize the urgency to examine our research questions for non-English speaking caregivers and expect this can be a logical extension of our efforts.

This study had several strengths, including the fact that the research question addresses a major gap in the dental profession's quest to help address the childhood obesity epidemic. Understanding caregivers' opinions and perspectives is an absolutely essential next-step in the dental profession's willingness to get involved in this realm of children's health care and advocacy.

Although our findings cannot be broadly generalized to all dental settings, there are many clinical settings comparable to the one reported with similar family demographics these include federally qualified community health clinics, county health department clinics, and children's hospital dental clinics. Future research in the private practice setting is a next logical step in this investigative arena.

A novel finding of this study was further insight into caregivers' perspectives on the concept of deploying formally trained nutritionists as collaborators in the dental practice setting. Our findings support this approach as one likely to be valued by many caregivers, although some may prefer to be referred to their child's primary physician for consultation and nutritional referral as needed. It should be noted that collaboration with nutritionists in the dental setting may offer unique opportunities in those clinical facilities (community health centers, county health departments) where both dentists and nutritionists often are employed in the same facility.

CONCLUSIONS

Our findings suggest caregivers are generally receptive and comfortable with weight-related conversations in the dental setting when the doctor/patient relationship has been previously established and the approach/tone is compassionate. Caregivers were open to the idea of having nutritionists in the dental setting, but some expressed concerns regarding costs and time, while a few thought it may be a duplicative service provided by their pediatrician. Taken together, these findings point-out that dentists have an opportunity to help in the fight against childhood obesity through screening, nutritional-related counseling for receptive caregivers, and referrals for caregivers who may prefer to consult with their child's primary care physician.

CONFLICTS OF INTEREST

The authors of this manuscript declare that they have no conflicts of interest.

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All authors have provided a significant contribution to this manuscript and have reviewed the final paper prior to its submission

for publication.

DISCLOSURES

This manuscript is based in part of a Master's Thesis completed in the Graduate School at the University of North Carolina at Chapel Hill.

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