CAREGIVERS’ PERCEPTIONS ABOUT DISCUSSING THEIR CHILDREN’S WEIGHT IN THE DENTAL SETTING

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ABSTRACT

Felicia V. Swinney: Caregivers’ Perceptions About Discussing Their Children’s Weight in The Dental Setting
(Under the direction of William F. Vann, Jr)

BACKGROUND: Childhood obesity poses myriad health problems. A major gap exists in understanding caregivers’ perceptions on the role of the dental team in providing weight-related counseling; our aim was to obtain in-depth information regarding caregivers’ perceptions about the role of the dental team.

METHODS: A qualitative investigation was completed using semi-structured, 45-minute interviews of English-speaking caregivers of children ages 2-6 under routine care in a dental school-based clinic. Interviews were transcribed, coded, and analyzed using ATLAS/ti data analysis software.

RESULTS: Caregivers expressed their perceptions of weight-related counseling with the dental team. Caregivers were: 1) highly receptive to the team’s provision of caries-related nutrition counseling and 2) generally receptive to healthy-weight counseling, while emphasizing rapport and compassion was essential.

CONCLUSIONS: These findings provide an in-depth understanding of caregivers’ perceptions regarding the dental team’s approach. Caregivers emphasized a compassionate, family-centered approach is essential to providing weight-related counseling in a dental setting.
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Introduction

Once seen mostly in adults, obesity now affects children in similar proportions.\textsuperscript{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.\textsuperscript{2} Underscoring the seriousness of this epidemic is this recent stark fact: more than one in three children and adolescents in the United States are overweight or obese.\textsuperscript{3} These collective statistics have prompted Healthy People 2020 to rank childhood obesity reduction as one of our nations’ highest health priorities.\textsuperscript{4}

Childhood obesity poses myriad health problems, many with life-long repercussions including high blood pressure, diabetes, and heart disease.\textsuperscript{5} Additionally, overweight children often have lower self-esteem.\textsuperscript{6} Children who are overweight at a young age are more likely to remain overweight into their adolescent years,\textsuperscript{5} underscoring the dramatic impact on the future of health care costs.\textsuperscript{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.\textsuperscript{8-10} It seems clear that the most efficient and likely dental practice model would be the incorporation of healthy weight counseling in the context of preventive dental care and anticipatory guidance. In 2005, Glick\textsuperscript{7} advocated that dentists take a role in weight-counseling. For adult dental patients, Hague and co-workers\textsuperscript{11} 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.\textsuperscript{12}

Curran and colleagues\textsuperscript{12} reported some 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 colleagues\textsuperscript{13} surveyed 1,779 pediatric dentists, reporting similar potential barriers. These included concerns about offending parents/patients (54\%), appearing judgmental (53\%), and concerns about patients’ acceptance of weight-loss advice (47\%).\textsuperscript{13}

**Caregivers’ perceptions of discussing their children’s weight in the dental setting**

Relative to child dental 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 opinions influence clinical practice, and it is difficult to institute practice changes that go against public opinion.\textsuperscript{14} Therefore, 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 on 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. All were English-speaking caregivers of children ages 2-6 years.

Caregiver Recruitment and Interview

One investigator (FS) conducted all interviews. Caregiver participants were accompanied individually to a private room and given a thorough explanation of the study. Consent documents approved by the UNC-CH Biomedical Review Board were completed. 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.\textsuperscript{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.\textsuperscript{16} The research instrument was developed by the lead investigator PI (FS) under the guidance and with consensus of the research team of collaborators/coauthors using the conceptual framework based on the model of Wu and colleagues.\textsuperscript{17} This framework (Figure 1) is an explanatory theory\textsuperscript{17} 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 dental clinic. Afterwards, with the input of the collaborators of this study, 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 (FS) made observational notes derived during the interview session. The audio recordings of the interviews were transcribed verbatim and then checked for accuracy by concurrently reviewing completed transcripts and listening to recorded interviews by the primary investigator. Transcribed interviews were then coded and analyzed using ATLAS.ti data analysis software.

An initial set of approximately 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 (JB and FS) independently coded the initial two interviews. Differences in coding between investigators 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. The concepts and themes were categorized using qualitative analysis software ATLAS.ti.
Results

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

Theme 1: Caries-related nutrition counseling in the dental setting

To establish a baseline, we queried the caregivers at some length about diet as related to caries-related nutrition counseling for children. They expressed the view that they “expected” these discussions during a dental visit and felt it is important to be comfortable discussing these matters with the dental team. To summarize this theme from Table 2, the caregivers had strong perceptions that the dental team has a clear responsibility for caries-related nutrition counseling and felt completely comfortable discussing this dimension with them.

Theme 2: Healthy-weight nutrition counseling and discussing children’s weight in the dental setting

Many caregivers were receptive to the idea of discussing their child’s weight in the dental setting. They expressed comfort in speaking with the dental team and trusted their opinion as it pertained to the overall health of their child. Two important concepts 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 childhood obesity in the dental setting. 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 the dentist 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 embraced the idea of this concept. They felt this could be an additional service beneficial to the overall health assessment of the child; however, there were concerns with 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 with the pediatrician.

**Theme 4: Perceptions of caregivers of overweight/obese children**

In planning for this study, we found no data suggesting that caregivers of children perceptions would be affected by their children’s weight-status; however, many dentists have anecdotally reported this would be a concern so we examined this question *post hoc*. As noted in
Table 1, four children were overweight/obese. Their caregivers were in fact enthusiastic in discussing weight in the dental setting.
Discussion

This 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,\textsuperscript{20} wherein parents offered receptive feedback to weight counseling for their child/adolescent dental patients. In our qualitative descriptive study, caregivers 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 colleagues\textsuperscript{21} 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.\textsuperscript{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 when coupled with discussions about caries prevention and future treatment needs.
We found that caregivers welcomed the presence of nutritionists 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. Families with limited financial resources had more uncertainty about scheduling such an appointment because of the cost; however, several 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 as an attractive option.

In summarizing caregivers’ perceptions, all were comfortable and trusting in the dental setting for weight-related screening procedures and most said they would be more comfortable discussing weight with their pediatrician with a subsequent referral to the nutritionist if needed. Overall, these caregivers sensed there was a perceived hierarchy for the referral process as well as a sense of loyalty and trust for their physician for weight-related recommendations, which could be the reason for this perception.

As early as 2003, the dental office was recommended as a setting for childhood obesity screening. 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. Once recorded, height and weight can be converted easily and quickly into a body mass index (BMI) percentile. Under this scenario, it is not impractical for dentists to screen for childhood obesity.

In 2012, Perrin and colleagues found that only 22% of caregivers recalled having being 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 overweight/obese. Depending on the viewpoint of the caregiver, the dental team can make a referral to a nutritionist or the child’s primary physician.

Several potential barriers have been identified\textsuperscript{12,13} and they generally fall into the realm of offending caregivers by discussing potentially embarrassing and sensitive information about their children. We found caregivers were receptive to having a discussion regarding their child’s weight, but valued 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.\textsuperscript{15} Used commonly in medicine and nursing, this methodology is used infrequently in dental research, although studies by Mofidi and colleagues,\textsuperscript{25} Horowitz and colleagues,\textsuperscript{26} and Isong and colleagues\textsuperscript{27} offer excellent examples of published dental studies using QR. Reviewed and trumpeted recently in an excellent piece by Edmunds and Brown,\textsuperscript{28} QR is likely to take on a broader utilization in future dental research.

Although this scope of the QR 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 were limited to caregivers’ opinions about children ages 2-6. While there is no evidence to expect that caregivers harbor different opinions on weight-related matters for children of different age groups, exploration of other age-groups is an avenue for future research. We targeted the 2-6 age because parents generally have more control over the diets and nutrition for younger children. The medical literature is silent on the question of whether there are differences in the perceptions of caregivers of normal versus overweight/obese children. Although our sample size was small, our findings revealed there was no difference in the response of caregivers of overweight/obese children; indeed, the latter welcomed the discussion of weight-related counseling even though some had previous experience with their pediatrician.

Qualitative studies such as this one are highly dependent on communication. Accordingly, our study was limited to English-speaking caregivers because our investigators were not bilingual nor were our instruments translated. 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 on the role of the profession is an absolutely essential next-step.

Although our findings cannot be broadly generalized to all other dental settings, there are many clinical settings comparable to the one reported with similar family demographics, including 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 to be valued by many caregivers, although some
caregivers may prefer to be referred to their child’s primary physician for consultation and
nutrition referral as needed. The deployment of nutritionists in the dental setting offers many
opportunities for collaboration 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. Many caregivers welcomed the idea of having nutritionists at 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, our findings underscore that dentists have an opportunity to help in the fight against childhood obesity through screening, nutrition-related counseling for receptive caregivers, and referrals for caregivers who may prefer to consult with their child’s primary care physician.
### APPENDIX 2: TABLE 1 CAREGIVER AND CHILD CHARACTERISTICS AMONG INTERVIEW PARTICIPANTS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No. of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>14</td>
</tr>
<tr>
<td><strong>Age Range (Years)</strong></td>
<td></td>
</tr>
<tr>
<td>25-34</td>
<td>7</td>
</tr>
<tr>
<td>35-44</td>
<td>6</td>
</tr>
<tr>
<td>≥45</td>
<td>2</td>
</tr>
<tr>
<td><strong>Level of Education</strong></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>2</td>
</tr>
<tr>
<td>Completed high school</td>
<td>3</td>
</tr>
<tr>
<td>Some college</td>
<td>5</td>
</tr>
<tr>
<td>Completed College and above</td>
<td>4</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
</tr>
<tr>
<td><strong>Child Age Range (Years)</strong></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td><strong>Body Mass Index BMI</strong></td>
<td></td>
</tr>
<tr>
<td>(Percentile)</td>
<td>11</td>
</tr>
<tr>
<td>0-84</td>
<td>1</td>
</tr>
<tr>
<td>85-94</td>
<td>3</td>
</tr>
<tr>
<td>&gt;95</td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX 3: TABLE 2 THEMATIC AREAS OF CAREGIVERS’ RESPONSES

| Theme 1: Caries-related nutrition counseling in the dental setting | • “That’s what they’re here for …if you can’t talk to them (the dentist), then you shouldn’t be visiting them.”
• “She gives me information and I feel comfortable talking with her.”
• “Oh, absolutely… They explained it at my level and not at the dentist’s level…that really helps a lot.” |
| --- | --- |
| Theme 2: Healthy-weight nutrition counseling and discussing children’s weight in the dental setting | • “If they’re compassionate and came at me knowing they have my children’s best interest, then I wouldn’t get offended.”
• “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.”
• “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 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 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.” |
| Theme 3: The role of the nutritionist in the dental setting | • “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 wouldn’t see any specialist unless Medicaid would cover it, and I wouldn’t go to… anybody unless the pediatrician referred me to them.”
- “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.”
- “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 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.”

<table>
<thead>
<tr>
<th>Theme 4: Perceptions of caregivers of overweight/obese children</th>
</tr>
</thead>
<tbody>
<tr>
<td>“It wouldn’t bother me… at all.”</td>
</tr>
<tr>
<td>“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”</td>
</tr>
<tr>
<td>“I’m not a person to take offense to anything like that… it’s just looking out for the best of the child…”</td>
</tr>
</tbody>
</table>
**APPENDIX 4: TABLE 3 MESSAGE DELIVERY SUGGESTIONS AS MODIFIED FROM TSENG ET AL.**

<table>
<thead>
<tr>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>“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.”</td>
</tr>
<tr>
<td>“If we can change your child’s eating habits now, we could prevent weight and cavity problems in the future.”</td>
</tr>
<tr>
<td>“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.”</td>
</tr>
<tr>
<td>“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.”</td>
</tr>
<tr>
<td>“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.”</td>
</tr>
</tbody>
</table>
REFERENCES


