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Oral Health Provider Perceptions of Dental Therapists and Oral Health Equity in the Southeastern United States

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Abstract

Purpose: A growing need for oral health care is challenged by the maldistribution of oral health providers and lack of opportunity to access oral health care in the current system among underserved populations. Emerging workforce models, such as dental therapists, is one option for improving oral health equity and promoting access across racial/ethnic and socio-demographic groups while addressing those who suffer from disparate lack of access. The purpose of this study is to investigate existing dental workforce perspectives in several southeastern states about emerging workforce models, specifically dental therapists, as a first step in moving toward workforce diversity and oral health equity. **Procedures:** Sixteen dental clinicians participated in focus group research.

Findings: Open coding and the constant comparative method was used to analyze the data. Five themes emerged.

Conclusions: The findings showed that participants held exclusionary and contradictory attitudes toward providing care to marginalized and underserved groups, questioned whether dental therapists had the training and skill to practice certain procedures and were most concerned about maintaining their own economic security. Findings were characterized by an absence of cultural competency and a resistance to intellectual inquisitiveness. Dialogue about how to address oral health inequity for the poor and underserved was given scant attention. These findings raise serious concerns as to whether dentists will become collaborative with other sectors of society to remedy the social policies that lead to oral health disparities and are willing to address the inequitable pain and suffering among those without access to oral health care.

Keywords

Dental therapists; Oral care equity; Dentists' attitudes; Emerging workforce models; Oral health care disparities

Introduction

The 2000 U.S. Surgeon General's Report on Oral Health emphasized a broad definition of oral health that includes all aspects of the dental, oral and craniofacial complex. The report also accentuated the interaction, interconnectedness and inseparable aspects of oral and systemic health that represents "the very essence of our humanity [1]". Much is published in the scientific literature and the popular press about dental diseases [2-5]. Over the years, oral health concerns have broadened beyond teeth and dental related structures and functions to include oral health and many other craniofacial diseases, as well as the bi-directional relationship between oral health and systemic health [6]. The report also describes the relationship between oral health and quality of life. The interest in these relationships, while not new, has tremendous potential for improving health, including oral health. Ironically, many oral diseases are preventable. Unfortunately, population and individual evidence-based prevention strategies do not reach the entire population, particularly children of color and others who have limited financial and geographic access to oral health care. There is a growing need and demand for oral health care, which is challenged by the maldistribution of oral health providers. Creative options are needed if resolution to this problem is expected.

The Commission on Dental Accreditation implemented accreditation standards for dental therapy education in the United States [6]. Advocates believe that this action is a critical step towards advancing the implementation of dental therapy programs across the United States and improving access to cost-effective and equitable quality oral health care for the millions of underserved patients in this country [7]. Legislation, passed in four states, authorizes the implementation of the dental therapist (DT) model practitioner. Policymakers are considering similar mandates in another 10 states including two in southeastern U.S.-South Carolina and Georgia [8]. An essential component of the full implementation of dental therapists across the United States is the willingness of dentists to embrace dental therapy in their practices. The purpose of this study was to investigate the perspectives of participants within the existing dental workforce in several southeastern states about emerging workforce models, specifically about DTs, as a first step. DTs are considered to be an actionable step in moving toward workforce diversity and oral health equity that will reduce socio-demographically disparate pain and suffering and address the needs of all individuals.

Alternative dental providers such as Dental Health Aide Therapists, Advanced Dental Therapists, and Dental Therapists (collectively referred to as DT for this study) have been safely and effectively employed in the dental workforce in over fifty-four countries for over one hundred years [7]. Nevertheless, the American Dental Association/organized dentistry and individual dentists in the United States have strongly opposed the implementation of DTs [10-13].

There is little factual data regarding U.S. dentists' attitudes towards DT's. British studies such as those published by Gallaghar and Wright [14] conclude that there is a general lack of information and knowledge regarding the scope of practice permitted by DTs: however, the British dentists held favorable opinions towards DT's. Other international studies by Ross [15] and Kravitz [16] found that there is a need to educate dentists regarding the training, skills and limitations; however the lack of support and negative impressions of DT's prevail.

When examining the limited literature regarding U.S. based dentists' perspectives and attitudes towards DTs, research from To'olo et al. [17], Lopez et al. [18] and Blue et al. [19], which studied

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attitudes of pediatric dentists, dental school faculty and Minnesota private dental practitioners respectively, followed international trends, showing a lack of knowledge regarding skill and utilization opportunities about DTs. All three groups rejected the utilization of DT's to improve patient access or to conduct irreversible procedures. However when deans of US dental schools were questioned [20], there was a more favorable opinion. The vast majority of deans supported expanding the scope of practice for DTs. Over 50% of dental school deans surveyed by Aksu, et al. [20] recognized that mid-level dental providers should be included in the future of dentistry.

In summary, research internationally and within the United States about dentists' perceptions and attitudes towards introducing DTs as a part of the dental care team demonstrates a clear lack of knowledge in relation to the skill, training, limitations, or cost effectiveness of DT's. In areas where dentists were open to the concept of mid-level providers, they expressed a belief that these providers should provide care to targeted populations. Current trends demonstrate the need to educate current and future dentists about the potential roles and benefits of dental therapists.

Materials and Methods

Participants

The Florida, Georgia and Mississippi Dental Associations were solicited for dentist participants who would agree to partake in the study. After failing to receive favorable responses to the invitation, researchers solicited, via mail and email, private practice and public health dentists in Atlanta (GA), Jackson (MS) and Tampa (FL). A convenience sample of n=16 participants was recruited for participation. These participants included 15 dentists in clinical practice and a hygienist with over 20+ years of clinical experience. Of the dentists, two had 5 or less years of clinical experience, one had 6, 10, and 16-20 years, three had 11-15 years, four had over 20 years; information for the remainder is unknown. One dental practitioner worked in hospital dentistry and another in hospital and correctional dentistry; two were endodontists, three in public health dentistry and five in a general/family practice and a hygienist who worked in in a clinical setting. The practice setting of three dentists is unknown. Participants ranged in age from 35 to 65 years, although the age of two is unknown. The sample included seven Caucasians, eight African Americans and one Asian, nine females and seven males.

Data collection

The Institutional Review Board (698502-3) approved this study. Three separate focus group meetings lasting 90 minutes each were conducted in Florida (n=6), Georgia (n=7) and Mississippi (n=3) by a moderator not associated with the analysis. The same questions were used for each focus group meeting. The interviews were audiotaped and transcribed verbatim by an individual not associated with the analysis This method has been reported and used by others [21-24].

Focus groups were designed to ascertain participants': [1] awareness of emerging dental workforce models, [2] beliefs about how dental therapists, advanced practice hygienists or tele-dentistry could impact practice, [3] perceptions of how workforce models could assist patients in establishing an oral care home and reduce care costs, [4] willingness to delegate and the patient services they would be willing delegate to a mid-level provider, [5] beliefs about the type of supervision they would provide, and [6] descriptions of the conditions under which they would employ these new providers (Table 1).

Data analysis

Data were open coded by one of the authors. Each focus group transcription was analyzed as a distinct and separate set before proceeding to the next transcription using line-by-line coding, and initial coding and focused coding. This process involved coding; refining codes; identifying examples to support the categories; analyzing within categories; looking for themes across categories; making a master outline showing relationships; and locating quotations to support the outline. Using the constant comparative method resulted in moving data to better fitting codes and codes to other categories or themes. Some themes coalesced and others expanded in the process. Across the three focus groups data saturation was reached, as the researchers observed that the no new findings were apparent.

Results

Five themes emerged from the analysis: "Holding doubtful attitudes", "Justifying the need", "Suffering no shortage of providers", "Articulating dental hygienists' views", and "Recognizing the benefits of midlevel providers" (Table 2). "Holding doubtful attitudes" refers to participants' beliefs concerning why using dental therapists cannot/ will not work. "Justifying the need" refers to their assertion that the need for dental hygienists/therapists is not justified. "Suffering no shortage of providers" refers to an observation that treating all patients -- the insured, un-insured, and under-served is plausible-and that there is no shortage of practicing dentists willing to provide such care. "Articulating dental hygienists' views" refers to the participants' description of why dental hygienists believe that dental therapists are essential to the workforce. "Recognizing the benefits of midlevel providers" refers to the ways in which dental therapists can assist in the care and delivery of oral healthcare.

Holding doubtful attitudes

Many participants summarily rejected the notion of integrating midlevel providers. "We don't feel like a midlevel provider or a dental therapist should be providing care for people" characterized their position. A lack of economic benefit was pointed out by others who stated that, "If you're doing a filling on someone, it's going to cost the same as if I do it or if someone under-trained does it" and, "they require direct supervision and lack [an] appropriate level of training" [because they would be] "doing procedures they're not educated for, no matter what". One other participant opined that dentistry already has midlevel providers and, "it's already difficult trying to manage assistants". Another claimed that, introducing more people into the dental community would make things "more difficult", while another surmised that it would "create more chaos".

One participant reported that, "It's a waste of time and money and energy when they've already spent millions upon millions of dollars to do this". Similar reasons for reluctance to this workforce model were offered, "We have a good model in dentistry […] a prevention model carried out by people that are skilled and trained to a certain level that fits with the dentist being the head of the team".

Protecting their professional practice was another concern. "I'm trying to protect the turf of the dentists". Another participant asserted that with an introduction of mid-level providers, dentists would just end up "fixing a lot of mess" and "still be liable at the end of the day. It's just extra work, extra everything" while another stated that this was "unfair to us or to the people that we serve". Supporting his position, one participant remarked that, "I'm going to do it correctly.

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Table 1: Questions for Oral Health Provider Focus Groups.

Focus Group Questions
1. What barriers do you think have the most impact on access to oral health care in your state?
2. With respect to service delivery, has your practice been able to effectively provide care to all requested appointments during the last 12 months?
3. Locally, in your opinion, what policies have the biggest impact on increasing access to oral health care for children? For adults?
4. Other than improving reimbursement, how do you think our state can improve access to oral health care for low-income families?
5. Are you aware of the different types of emerging workforce models in dentistry?
6. Do you believe that you have adequate knowledge on the role of emerging workforce models in dentistry?
7. Do you believe that some of these emerging workforce models may serve a role in reducing the costs of care for individual patients and families?
8. How do you think that adding Advanced Dental Therapists or Dental Therapists to your practice would affect your practice?
9. Would you be willing to delegate some patient services to a midlevel provider if quality is not an issue?
10. What types of services would you be willing to delegate to a midlevel provider?
11. If you were to employ a midlevel provider in your office, what kind of supervision would you utilize?
12. Are there any conditions under which you find it acceptable to employ one of these new providers?

Table 2: Themes by Conceptual Definitions and Representative Examples.

Themes	Conceptual Definitions	Representative Examples
Holding Doubtful Attitudes	Using dental therapists cannot/will not work.	"We don't believe that anybody other than a dentist should be doing irreversible procedures."
Justifying the Need	Suggesting the need for dental therapist is not justified.	"What do the studies say? How many cases have they done? How many fatalities have they had?"
Suffering No Shortage of Providers	Treating all patients -- the insured, un-insured, and under-served is plausible. There is no shortage of practicing dentists.	"There's enough providers to care for everyone here."
Articulating Dental Hygienists' Views	Perceiving a need for dental therapists	"So sometimes they feel under-recognized. I think there's that sense of recognition and individual responsibility that they are seeking."
Recognizing the Benefits of Midlevel Providers	Assisting in the care and delivery of oral healthcare.	"They work for, in Alaska, the Indian Health Service, so it's the government."

I'm going to provide the proper protection for my patient. There's nothing that somebody else can do cheaper that I can't do."

Several participants reported that introducing DTs would compromise the standard of care and that DTs would end up serving low socio-economic patients exclusively. He asked, "Even if you're indigent, do you deserve a lower level of care? I don't think so".

One participant predicted that employing DTs would result in problems from using "undereducated people doing treatments that are over their heads". Others asserted that even with cost adjustments, bringing in mid-level providers would result in "a high no-show rate". Reifying concerns about mid-level providers' qualifications, one participant forewarned that if the service "is not provided correctly, then that's not a savings because unfortunately, proper training needs to be done then and proper care needs to be provided". Another participant was unwilling, "to have to manage even a more disruptive situation [that would be caused by having an] advanced dental therapist". Besides "we're functioning now as a dental team [and] there is not an unfulfilled role".

A lone participant urged others to adopt a different stance and suggested that, "We have to put things in context and we're having this conversation amongst ourselves now without the context of other specialties or other organizations that have had these same conversations".

A participant who disagreed reported that, "I don't think that we should just turn it over without a lot of serious study" while claiming that dentistry is "very meticulous", reminding others not to underestimate its difficulty. One other participant urged a study of how this model could be translated into dentistry. Another participant pointed to the dangerous precedent that would be set because "it would either cease or slow down the productions of dentists and physicians like it's already doing". One other participant asserted that "medical doctors were unhappy with PAs and RNs doing these examinations and treating these colds and flus and doing all of these little minor procedures because "this was not only bringing them a lot of money, it was also taking money out of dentists' pockets."

Justifying the need

Participants questioned the need for midlevel providers and wondered what evidence supported this emergent workforce model. They asked: "What do the safety records show"? "How many cases have they done? How many fatalities have they had"? "In the other states where these individuals are practicing, what is the record there"? In contrast others pointed out that midlevel providers "do much more advanced and invasive procedures than even dentists may do" in nursing and as physician assistant.

Suffering no shortage of providers

All of the participants reported that there was no shortage of dentists. While sharing that the number of dentists is adequate, he indicated that they are not "distributed equally". One participant suggested that, "fixing that distribution is the key to fixing the problem". All of the participants asserted "that there was no "access to care problem" and that the real issue was just getting "the patient in" [and finding] "some kind of way to get the entitlement programs working in a manner where we can provide the treatment".

Articulating dental hygienists' views

Speaking on behalf of dental hygienists (DHs), several participants surmised that DHs tend to feel under-recognized and are seeking "recognition and individual responsibility". One other

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participant suggested that DHs "aren't aware of their limitations and don't have a thorough idea of why they're in that role, [are] always looking to expand themselves, even though it may not be to the benefit of the people they serve". Concurring with this, a participant suggested that hygienists were supportive of the movement towards mid-level providers because "they don't understand the whole concept of their place". One participant summarized the group's collective sentiments. "A lot of people want a little more freedom, not necessarily everybody, but I know hygienists would like to do more than maybe what they already do and [providing mid-level care] was an entryway to do that".

Recognizing the benefits of midlevel providers

Participants recognized ways in which mid-level providers were already being used in Minnesota and Alaska. One participant reported that, "Colorado's done things where they've had hygienists with independent practices with the idea of going out to some of the more rural areas". Another described that, "there's 39 people [in Minnesota] being used. It's been in existence for a few years now". One other participant mentioned that Maine was onboard but that their program was not yet active. Most of the participants were aware that Alaska used mid-level providers and seemed supportive. "If there's an area where it's impossible to get access"…[and] in a situation like that, there's no way they can get there and you can't really get to them, [then this is] better than nothing". However, he asserted, "Other than that, I really don't see a need for a dental therapist or midlevel provider." One other participant commented, on Alaska's remoteness and extreme situation but he just did not see the need for mid-level providers in Florida. Another participant described how dentists would fly to various Alaskan communities and spend a week caring for patients. He proffered that "some people that still say that these dentists provided care more efficiently than a midlevel provider [who] had limited knowledge and limited background" despite only coming in occasionally.

Discussion

The findings showed that participants held exclusionary and contradictory attitudes toward providing care to marginalized and underserved groups. While they would concede that DTs were needed in remote locations such as Alaska, they were not open to having DTs in their own practice. This perspective was driven by two concerns. One concern was their perception that they would lose income. However, this belief was unsubstantiated. Research from international practices [7] as well as preliminary data from Minnesota shows that mid-level providers may actually increase income of dentists [25].

The other concern was related to scope of preparation and whether DTs had the training and skill to perform certain procedures; these perspectives ignored the safety and quality studies of dental therapists [3,9,26]. However, little discussion ensued regarding the type of procedures that DTs could perform, how that could free up dentists to perform more advanced treatments [19] or how they would increase their time and profit to provide more complex procedures. Overall, participants seemed out of touch, if not insensitive to the access and disparity issues and more importantly to the human suffering. Their example of providing periodic (episodic) care to remote areas failed to acknowledge that such a model of care is neither sustainable nor effective. Further, others have pointed out that philanthropic care is not a system of care [27].

The lack of recognition by participants of the systemic barriers that restrict the ability to achieve good oral health care was evident. For example, recent literature clearly demonstrates the cost problems preventing many seniors from affording regular oral health care resulting in an increased prevalence of edentulism [28]. The findings appear to suggest a concern emanating from a demographic shift based on the nemeses of race/ethnicity, color, geographic locale, payment ability, or the lack of oral health insurance. The intellectual basis for objection to the use of DTs does not reflect inquisitiveness around 'who' are the DTs, what value do they bring to a dental practice from a business perspective, what history exists regarding poor service or even malpractice related to this DTs as compared to the general practice of other oral health providers. Notably, the participants did not acknowledge the 127 million Americans who are currently without oral health care insurance [29]. Equally concerning is edentulous seniors and the poor who face a myriad of barriers that limit their access to oral health care. Barriers range from medical co-morbidity, excessive waiting times that lead to weariness, lack of transportation or getting to appointments, not being able to speak English, affordability of care or finding a specialist, and insurance regulations that thwart their ability to receive appropriate care [30].

Participants' discussions included no intellectual inquiry related to the financial benefits or limitations of engaging DTs as members of the team to provide quality care for cases and that, concomitantly, relieves the dentist to provide equivalent quality services that are outside of the scope of practice of the dental therapist. Research from practice settings confirms the positive contribution to the financial balance sheet of those dentists that have chosen to incorporate dental therapists into their practice teams [25].

The dentists' concern with maintaining turf, profitability, and economic security runs counter to the type of attitudes that one might expect from practitioners of such an evidence-based profession [31,32]. Perhaps it is the case that they viewed providing care to older adults or children with Medicaid as someone else's concern. Such attitudes do not begin in dental school. They are the product of socialization and long-standing beliefs that have been maintained and left unquestioned [33].

It is important to recognize the limitations that are inherent to the use of focus groups such as difficulty making generalizations. In conducting qualitative research, it is generally understood that the findings are temporal and dependent on the participants. Thus, the findings of the study are not transferable beyond the context in which they were conducted and are limited to the perceptions of providers in the Southeastern United States.

Most important, we believe one of the primary issues presented here is one of systematic bias and cultural hegemony. The authors suggest this be addressed and resolved by challenging these beliefs as early as middle school and by offering evidence and experience that runs counter to their perspectives. Also, dental schools must challenge and expand student perceptions by placing them in situations that cause them to learn from those who have suffered from oral health marginalization and lack of care [33,34]. As the dental therapy movement grows across the country, dental schools should consider exposing students to dental therapists and the evidence supporting their education, practice and effectiveness in reaching underserved populations.

The authors suggest that a lack of cultural competence seems to be the overriding issue that undergirds the perspective of the participants. The opinion that providing care to the poor, seniors and medically underserved populations should be regulated to charity rather than being the responsibility of the profession, just as it is with insured and self-pay patients, marginalizes problem-

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solving efforts. This perception highlights that this is a problem that dentistry needs to resolve. As Williams and Wyatt stated "health professionals need to work collaboratively with other sectors of society to increase awareness about the health implications of social policies in domains far removed from traditional medical and public health interventions" [35]. The foundation of a change in thinking and acting in oral health has yet to be seen. Surely medicine has not yet handled all issues, but at least there is an open and conciliatory dialogue.

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