Research

Educational Preparedness to Provide Care for Older Adults in Alternative Practice Settings: Perceptions of dental hygiene practitioners

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Abstract

Purpose: Research indicates that geriatric education continues to be inadequate across the health professions and graduates are unprepared to care for the increasing numbers of older adults. The purpose of this study was to explore dental hygiene practitioners' perspectives regarding whether their dental hygiene education prepared them to treat older adults in community and institutional settings.

Methods: A qualitative phenomenological study design was utilized to conduct in-depth interviews with a purposive sample of dental hygienists currently providing care for older adult patients in alternative practice settings.

Results: Fifteen dental hygienists from across the U.S. working with older patients in alternative settings, met the inclusion criteria (n=15). Common themes related to dental hygiene practice emerged from the qualitative data included: adapting patient care to alternative settings; emotional toll on the practitioner; physical challenges; outcome goals for treatment; need for hands-on clinical experience in alternative settings as dental hygiene students; and working as part of an interprofessional team.

Conclusion: Participants generally agreed that they were not prepared to care for dependent older adults in alternative settings as part of their dental hygiene education. Clinical experiences working with older adults in alternative settings, as part of the dental hygiene clinical curriculum, are needed to prepare graduates to care for this growing population.

Keywords: dental hygiene education, geriatric dentistry, gerontology curriculum, nursing home residents, alternative practice settings

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Introduction

The older adult population in the United States (U.S.) is expected to double to 83.7 million by 2050,[1] and the oldest-old (those age 85 and older) is projected to increase from 6 million to 14.6 million by 2040.[1] Increased educational levels of the older adult population has been shown to play a role in overall well-being and equates with above-average health.[1,2] A key indicator of well-being is improved oral health, resulting in an average of only 1 in 5 older adults losing all their teeth.[2,3] However, for dentate older adults, issues with access to dental care, place this group at risk for untreated oral disease, which can lead to adverse health outcomes.[4]

Health challenges related to decreased mortality and increased age include chronic disease conditions with the majority of older adults reporting a minimum of one chronic condition with coronary artery disease, arthritis, and diabetes the most commonly reported.[1] In addition to chronic disease, physical limitations resulting in some type of disability including issues with hearing, vision, cognition, self-care, or ambulation impact 35% of individuals over age 65.[1] About a third of community dwelling older adults report difficulty performing one or more of the Activities of Daily Living (ADLs).[1] In comparison, 95% of older adults living in institutionalized settings report difficulty with one or more of the ADLs.[1]

These health indicators, along with the expansive growth in this population, will have widespread effects on the healthcare system.[5] Gerontological practitioners are needed for this rapidly aging population,[6] however, students from across the health care disciplines frequently rank this area of practice at the bottom of their future professional life.[6]

Health Professions Geriatric Curriculum

Bardach et al conducted a review of geriatric education in health professions including medicine, nursing, pharmacy, dentistry, physician assistant studies, physical therapy, and communication disorders and found that geriatric education continues to be inadequate across the professions and graduates are not prepared to care for anticipated numbers of older adults.[7] Common barriers cited to including geriatric content across health professions include time in an already overloaded curriculum, limited faculty with expertise in geriatrics, and lack of quality clinical externship sites.[7]

The Commission on Dental Accreditation Standards (CODA) for Predoctoral Dental Education Programs does not contain a standard that is specific to the care of the geriatric or older adult.[8] However, the standard that broadly addresses this population states: "Graduates must be competent in providing oral health care within the scope of general dentistry to patients in all stages of life," allows for dental schools to determine how caring for the older adult will be addressed.[8] An outcome of having such a broad standard may be that dental graduates feel unprepared to care for older adults. Data from the American Dental Education Association (ADEA) showed a decrease in the number of dental graduates who felt well-prepared to care for older adults from 9% in 2002 to 0.2% in 2014,[9-12] despite 79% of graduates reporting the amount of content on geriatrics was considered to be appropriate.[12]

In comparison to other health professions, accreditation standards for dental hygiene programs address care of the geriatric patient in more specific terms. CODA standards state that "graduates must be competent in providing dental hygiene care for the child, adolescent, adult and geriatric patient."[8] However, geriatric patient competency assessments are up to the individual institution. Care of older adult patients occurs primarily in on-site dental hygiene clinics, minimizing students' exposure to the range of settings in which care for the dependent older adult may occur.

Evaluations of geriatric education in dental hygiene curricula have been reported infrequently in the literature. In 1988 Hutchinson found that the majority of programs spent an average of 5 hours on geriatric content in didactic courses.[13] Ten years later, Tillis et al found the average didactic time devoted to geriatrics reported in a convenience sample of U.S. and Canadian dental hygiene programs had increased to 10 hours.[14] In regards to a geriatric clinical component, Tillis et al found that only 54% of the programs reported a clinical component and only half of schools surveyed considered their geriatric curriculum to be adequate.[14] Both investigators recommend future research to evaluate the adequacy of geriatric education from the perspective of graduates.[13, 14]

Preparedness to Work in Alternative Settings

Studies indicate more attention to geriatrics in the dental hygiene curriculum is needed to prepare graduates to provide preventive services to dependent older adults in both community and institutional settings.[15, 16] The most common settings cited by Registered Dental Hygienists in Alternative Practice (RDHAP) in the state of California are residential/assisted-living facilities,[17] highlighting the need to support geriatric practice as a career choice for dental hygiene graduates.

Dental hygiene education experiences have been shown to influence practitioners' interest in providing care in in long-term care facilities. Pickard et al studied dental hygienists in Kansas and found that approximately two-thirds of the respondents felt their dental hygiene education adequately prepared them to care for the older adult and over three-quarters of this group, felt this preparation would influence their decision to work in a LTC setting.[16] Dickinson et al explored the readiness and willingness of dental hygienists in Texas to treat older adult patients in alternative practice settings.[15] Of the survey respondents, 45% reported feeling prepared by their dental hygiene education to provide care to older adults while a little more than half felt somewhat prepared and 4% felt unprepared.[15] Thirty-eight percent reported both a preparedness and a willingness to work in alternative settings such as nursing homes.[15]

These studies provide insight into how adequate preparation in dental hygiene programs can impact future career choices. The aim of this study was to explore practicing dental hygienists' perspectives regarding how their dental hygiene education prepared them to treat older adult patients in alternative settings.

Methods

The study was granted exempt status by MCPHS University's Institutional Review Board (protocol #IRB062016S). A qualitative, phenomenological study design was used to gather perspectives of a purposive, convenience sample of dental hygienists currently working with older adults in alternative settings (n=15). A qualitative approach using in-depth interviews was chosen given the lack of literature on the adequacy of geriatric education in general and specifically from the perspective of graduates which was suggested by Tillis et al in 1998.[14]

Inclusion criteria for the study was limited to dental hygienists working with the dependent older adult in an

alternative setting. Participants meeting inclusion criteria were a difficult population to access due to the limited number of dental hygienists working with this population in alternative settings, therefore, a snowball sampling method was also used.[19] An informational flyer was sent to state components of the American Dental Hygienists' Association (ADHA) asking for assistance in recruitment. ADHA members in California holding RDHAP licenses were contacted via email; those expressing interest were sent the informational flyer. Social media was also used to recruit participants. Recruitment continued until saturation was reached.[20]

Once identified, each potential participant was screened by telephone to determine if inclusion criteria were met and to confirm willingness and availability to participate. Qualified and willing participants gave informed consent. A demographic survey including years of practice, dental hygiene program and year of graduation, and experience working in alternative settings was distributed by email to each of the participants via a web-based survey tool.

Individual, in-depth interviews were scheduled and conducted in a web-based meeting forum supporting audio recording for later transcription. Interview questions were developed based on the literature and validated by oral health and gerontology content experts. Questions were pilot tested with a group of dental hygienists experienced in working with older adults. The interview consisted of a series of open-ended questions and lasted approximately 20 to 30 minutes (Table I). The interviews were transcribed verbatim by the investigator. Transcripts were organized according to each interview question and reviewed multiple times. An emergent approach capturing participants "voice" was used to develop codes summarizing major themes.[21] Codes were applied to the transcripts to cluster the data for each theme. A second investigator independently coded the data to ensure validity. Themes were then assigned phrases or 'names' to describe the meaning underlying each of the themes[21] and sample quotes were provided to illustrate the dimensions of each theme. Member checking was used to establish accuracy; participants reviewed the results and provided feedback on whether they accurately represent their feelings, knowledge and attitudes.[22]

Table I. In-depth Interview Questions

1) What skills did you learn in your dental hygiene program when providing oral care for older adults in alternative settings?
2) While practicing dental hygiene in alternative settings, are you still implementing these skills with patient care that you learned in your dental hygiene program?
3) Did you experience challenges transitioning from providing oral health care for the older adult while in your dental hygiene program vs. providing oral health care in alternative settings? And if so, what were those challenges?
4) What would have helped ease the transition?
5) Based on your experiences, what additional skills should be included in the dental hygiene curriculum to better prepare graduates in providing care to older adults in alternative settings?

Results

Fifteen dental hygienists from across the U.S. working with older patients in alternative settings, met the inclusion criteria (n=15). A little more than half (n=8), reported having over 20 years of clinical practice experience and over three quarters (n=12) reported practicing with older adults in alternative adult settings for less than 10 years. All of the participants (n=15) reported having worked in traditional clinical settings prior to practicing in alternative settings. The alternative practice settings included assisted living (46.7%) and nursing home/long-term care facilities (60%). The highest level of education reported was a master's degree. Participant demographics are shown in Table II.

Common themes related to dental hygiene practice emerged from the qualitative data included: adapting patient care to alternative settings; emotional toll on the practitioner; physical challenges; outcome goals for treatment; need for hands-on clinical experience in alternative settings as dental hygiene students; and need to work as part of an interprofessional team.

Theme 1. Adapting the Dental Hygiene Care to an Alternative Setting

Most of the participants reported their hygiene programs "did not train for alternative settings" although they reported having treated older adult patients in dental hygiene clinics as students. Many felt that the "actual skills learned in dental hygiene school are used with any patient regardless of practice setting." These skills included instrumentation, communication, thorough review of health histories, patient education, and adapting care for an individual's abilities. Participants felt a lack of focus regarding the specific changes and adaptation of these skills for treating elderly patients in alternative settings. They felt the majority of what they learned was "not from hygiene school, but from working with this population in alternative settings" One participant stated that "I was a little nervous before I went to do this [work in an alternative setting], it was definitely a whole different beast, a lot of new challenges came up."

Table II. Participant Descriptive Statistics (n=15)

	Frequency	Percent (%)
Highest dental hygiene degree		
Associates	2	13.3%
Bachelors	9	60.0%
Masters	2	13.3%
Missing	2	13.3%
Dental Hygiene experience (years)		
1-5	0	0.0%
6-10	1	7.7%
11-15	4	26.7%
16-19	0	0.0%
20+	8	53.3%
Missing	2	13.3%
Adult practice in alternate setting (years)		
0-3	5	33.3%
4-5	4	26.7%
6-9	3	20.0%
10+	1	7.7%
Missing	2	13.3%
Dental setting experience type*		
General Dentistry	13	100%
Pediatric Dentistry	2	13.3%
Periodontal Dentistry	2	13.3%
Other	5	33.3%
Missing	2	13.3%
Alternative practice setting type*		
Assisted Living	7	46.7%
Nursing Home / Long-Term Care Facility	9	60.0%
Hospital Setting	1	7.7%
Other	8	53.3%
Missing	2	13.33%

* Respondents may work in more than one type of setting; totals do not equal 100%.

Older adults in alternative settings have special needs and are typically medically complex. One participant stated that "we never really discussed what it takes when you are in a nursing home." Several of the participants expressed that the "biggest difference is the experience of handling the patients." "It's a totally different kind of dental hygiene." The participants felt that in a nursing home setting "you have to adapt very fast to the situation and work very fast" and dental hygiene school does not prepare you for this. They also felt it was challenging to "drop traditional training" and to "look at each older adult patient with individualized special needs as unique, and tailor treatment to those needs and abilities." One participant summed up the need for highly developed critical thinking and problem-solving skills by suggesting the clinician must "use critical thinking skills and think out-of-the-box as far as what is going on, what else is happening, and what is causing the things that are happening."

Theme 2. Emotional Toll of Caring for Dependent Older Adults

Many of the patients are no longer ambulatory and use a wheelchair in addition to cognitive, physical, sensory, motor skills, and hearing impairments. Several participants stated that they were not prepared for the "emotional and physical toll" of working with this population and felt their dental hygiene education did not prepare them for what they would find outside of traditional clinical settings. Some participants said, "it's very sad in the nursing homes". One participant stated, "I don't remember anyone saying, when you leave your first patient, and you are driving home, you may cry all the way." Another participant said, "whether it's disabilities of other kinds or the older adult population, you are treating a patient who is quite vulnerable and is in quite a vulnerable state of their lives." "You have to be comfortable" working in this environment. Several participants think it "takes a certain personality to actually go out and do this, it's not for everybody."

Theme 3. Physical Toll of Alternative Settings

Another challenge stated by participants was the physical toll of working with older adult patients in alternative settings. There is a lack of "ergonomically proper set up" in the various facilities. One of the main challenges identified was working with mobile equipment and adapting to less than ideal work spaces. One participant summed up this challenge, "It would be nice if they had a little room, in all these facilities, where you could take the patient, transfer them, work on them, and take them back to their room. But nope, we are standing on our heads trying to scale #15 (FDI #27) that's got a 10mm pocket. I have to contort and get down on my hands and knees when we are at somebody's bedside or in little apartment. It's hard, it's hard work."

Theme 4. Need to Adjust Outcome Goals for Treatment

In dental hygiene school or in a traditional clinical setting, practitioners are used to "patients wanting to repair their mouths towards health." Treatment goals are different in a nursing home. Families of the patients being treated "feel [the patient] is nearing the end of their life and of all of the problems that [the patient] has, fixing their last six teeth are not a priority." Many participants felt unprepared for this

shift and did not know how to adjust to this mindset. They expressed that as students and practitioners the "overall goal is to get to health, perfect health" but in these alternative settings, perfect oral health "is not the goal for the patient nor their families." They also stated that "we are very much point A to point B to point C educated." Participants found when working with individuals in alternative settings you may have to adjust expectations and be satisfied with "just knowing you are achieving a good level of progress." Many participants expressed issues related to this new way of thinking.

Theme 5. Need for Hands-On Clinical Experience in Alterative Settings

When asked, what would have helped ease the transition into treating older patients in alternative settings, the overwhelming response was experience and exposure. One participant stated "the way people would learn about the elderly is to have a rotation and experience, because it's kind of like show-and-tell. Nothing book-wise is ideal to learn the situation, the motivations, and what the teeth look like. It's just so different." A common theme was that "for some people it is out of their comfort zone" and many felt it was because students are never exposed to what they will see, hear, and smell in alternative settings. One participant spoke of an experience she had with students who were shadowing her. The patient being treated had dentures with bridges of calculus and the students had never been exposed to such heavy deposits. Not only did students feel overwhelmed, but they were unprepared as to how to approach cleaning the appliance. Another participant with experience as a dental hygiene clinical instructor for over ten years stated, "when you are in dental hygiene school, you see what is in front of you. So, if you have not had a patient with a partial or a denture, or isn't elderly, your experience is limited." The majority of the participants recommended increased exposure and experience in the form of clinical rotation in alternative settings.

Theme 6. Need to Work as Part of an Interprofessional Team

Participants exposed numerous aspects of working in alternative settings not encountered previously in school or traditional practice settings. In an alternative setting you must "form a relationship with the care staff, and create an integrated approach between medical professionals and dental professionals." One participant summarized the differences by stating, "You have to have an understanding how nursing homes are run, not just the care staff, but the administrative staff, because it is completely different from dental offices. The most challenging part of the job is getting the facilities to see the importance of oral care and making it a priority. You must know both sides of the pendulum. Everybody's priorities are different and they may look at oral hygiene care as one more thing they need to do. If you know the inner workings of how a facility works, then you can come up with solutions. That's the kind of integral approach you need."

Discussion

Research has shown a variety of concerns including complex health histories, the overwhelming nature of patient management, interaction challenges, and the emotional burden of providing care that have been cited by medical and allied health professions in regards to caring for the older adult.[23-27] Results of this study reflect similar concerns.

One participant stated a lack of preparation regarding what it takes both physically and mentally in regards to caring for older patients in nursing home settings. "Not only is it different ergonomically, it also requires a different state of mind when treating this patient. Many of these dependent older adults are approaching the end of their life, and family members want to limit treatment. They may not be interested in restoring the oral cavity back to health." Many participants said that although they understood the wishes of the family, it was difficult to change the mindset that the goal was "getting the patient back to total health." Studies have shown a common theme of frustration and disappointment among medical professionals regarding lack of help they could offer the older adult patient.[25, 28] Several participants felt, at first, that it was difficult to accept that they were treating the patient to the best of their abilities based on the limitations but that they were in fact actually providing a service to the patient.

Benefits of a curriculum in gerontology along with clinical learning experiences working with older adults have been observed in previous studies.[24, 29] A study conducted by Yoon et al found that while dental hygiene students possessed the "functional skills and knowledge" needed to perform oral health procedures, they lacked the confidence to modify this knowledge and skills to the older adult population in alternative settings.[30] Further results showed that exposure to this population helped the students to recognize and understand why oral health care may not be a priority in the alternative setting.[30] There was overwhelming agreement among the study participants that exposure and experience caring for dependent and medically complex patients in alternative settings should be part of the dental hygiene clinical curriculum. Results from this study were supported by the previous research conducted by Yoon et al and Wallace et al[30,31] This work reinforces the need for exposure and experience in providing care to the older adult population in alternative settings within the dental hygiene curriculum.[30,31]

Wallace et al concluded that students who receive a realistic introduction to the environments encountered in alternative settings such as nursing homes or long-term-care facilities are better prepared and more confident in their abilities.[34]

The need to work as part of an interprofessional team was also a common theme among the participants. Communication and collaboration between administrative staff and medical personnel of the facility and dental hygienists was integral in forming interpersonal relationships. Many participants felt improved communication and increased collaboration would improve the oral health of the patient and help to promote the importance of oral healthcare. It would also help dental hygienists understand the "the other side of the coin" when it comes to the responsibilities and time restraints of other professionals who also care for these patients. The dental hygienists felt that better knowledge of nursing homes operations and an improved understanding of the scope of challenges faced by management and administration would prepare them to advocate regarding the role oral health plays in the overall health and well-being of the patient. Dental hygiene students having clinical experiences in alternative settings such as nursing homes, will provide them with an introduction to the interprofessional collaboration skills needed for future practice.[32] One example of interprofessional collaboration in nursing home settings is the care (or case) conferences which often includes a nurse, occupational therapist, physical therapist, dietitian, and primary care provider along with family members. The purpose of the care conference is to discuss the resident's (or patient's) current status and goals for care.[33] Dental professionals historically have not been present at these meetings, however research suggests they would be welcomed as part of the interprofessional team to assist with oral health, as it applies to the older adult's well-being.[34]

Findings of this study are limited due to the small sample size and lack of a control group; all participants were currently working with older adults in an alternative setting. Participants also relied on "self-report" of their dental hygiene education experiences, including didactic content as well as clinical encounters.

Conclusion

This study assessed the experiences of practicing dental hygienists working with the older adult population in alternative settings to determine whether the gerontology education received in dental hygiene school adequately prepared them to treat this population. While most participants felt they received the basic skill set needed to treat any patient as part of their dental hygiene education, the majority felt that they were unprepared for the emotional and physical toll this type of work takes on the practitioner. Participants overwhelmingly agreed that exposure and experience in caring for older adults in alternative settings is needed as part of the clinical component of the dental hygiene curriculum.

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