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Dental hygienists as adult learners and educators to improve access to care

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Abstract: *Objective:* The purpose of the qualitative study was to understand dental hygienists as adult learners and educators in their quest to improve access to care. The intent of this article is to share the results from open and focused coding procedures and the participants' rich stories from which the analysis was constructed. *Methods:* A grounded theory approach to data collection and analysis was used. Data were collected from eight practitioners in three US states who met the inclusion criteria, using semi-structured interviews. Traditional grounded theory procedures with a constructivist emphasis on lived experiences of the participants and situational analysis were used to analyse the data. *Results:* The process of learning was experienced in three categories: Awareness, Adaptation and Relationships. *Awareness* was the process of learning participants experienced as developing consciousness of self, status quo, power and injustice of systems. *Adaptation* was constructed from experiences of specializing and creating to adjust to the new environments and prepare future practitioners. *Relationships* were developed to feel connected and collaborate to build support and gain respect to improve access to care. Dental hygienists as educators revealed one category: Improvement. *Improvement* was the process of educating others to enhance awareness, oral health and the dental hygiene profession. *Conclusions:* Dental hygienists were adult learners by using their experiences in the context of their struggle to improve health inequities. A strong educator role was necessary to make improvements in the oral health delivery system.

Key words: adult education; dental hygienists; health services accessibility; nursing homes; public health dentistry; qualitative research

Introduction

In the United States, health disparities were identified as a major problem in the Healthy People 2010 national initiative (1) and the Surgeon General's report on oral health in America (2). Populations suffering health disparities lack access to care for preventive, therapeutic and comprehensive services because of a multitude of problems and barriers existing within the current healthcare system (3). Disparate populations experience more disease, disability and early death than other populations (1, 4). These health experiences represent the *vulnerability* of specific populations for poor health (5). Populations identified as having health disparities include minority racial and ethnic groups; low-income

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groups; elderly, children, women and rural geographic populations; and individuals with special needs (1). An example of oral health disparities is evident in the following description of a situation encountered by a public health dental hygienist with a Mexican American school boy living in a rural community:

And then today we've had this case going on and this little boy has been in the nurse's office complaining of a tooth ache. He had facial swelling, pronounced submandibular enlargement, just looked sickly. I called his parents….He's just living in pain, intolerable pain. His eyes look sickly, he's dirty, he's just a sad, sad case….I'm just surprised that they [his parents] signed him up for the sealant program. Thank goodness they did. They were explained the danger of the infection from the teeth spreading to the blood stream, and the sinuses draining. The school nurse is convinced and I am too that there was a child that actually died from an abscessed tooth. It happens. I mean it happens in third world countries….How could I live with myself if something happened to this little boy? (Rogo EJ, unpublished manuscript)

This scenario is a snapshot of the sad reality that exists in the United States, a country that assumes a position as a world leader. The reality of dental decay is that it is widespread, being the most common childhood disease, five times more prevalent than asthma, despite prevention measures that exist (2). In addition, periodontal disease and oral cancer are prevalent in the general population (2). Oral diseases have an impact on the overall health of an individual (2).

Health can be viewed as a shared social responsibility (4). The US government is responsible for the public's health through federal, state and local public health agencies; however, alone these agencies are unable to assure health of the nation (4). An oral health initiative was organized by the Surgeon General's office which created the *Call to Action* to improve oral health and eliminate health disparities through partnerships between public and private entities (6). The American Dental Hygienists' Association (ADHA) was one of the participants in the Call to Action and since that time ADHA has aligned its vision of the future with the action plan resulting from the national initiative (7). The vision of the Advanced Dental Hygiene Practitioner (ADHP), alternative delivery models, collaborative practice models and certification in specialty areas was the ADHA's response to expand the scope of dental hygiene practice and improve direct access to oral health care (8). Currently, 32 of 50 states have some form of direct access (9), and dental hygienists in some states have the opportunity to own a dental hygiene practice as a business (10). Direct reimbursement of dental hygienists for services rendered has not kept pace with the expanded scope of practice. Only 15 states provide direct reimbursement of Medicaid to dental hygienists, but many states have restrictions on reimbursement such as requiring licenses with extended endorsements or providing care in institutions, public health settings or geographically underserved area. (11). Reimbursement to expand payment to dental hygienists from private insurance companies has been challenged by strong lobbying efforts by dentists (10).

As oral health professionals, dental hygienists' primary role is to contribute to the health and well-being of society (12). The Code of Ethics obligates professionals to justice and basic human rights and to support fairness and equality in access to quality and affordable oral health care (12). The dental hygiene profession values the public's trust and understands this trust is based on actions (12). Dental hygienists engage in actions to improve access to care by (i) providing services directly to the public or (ii) working on changes to systems and policies restricting dental hygiene practice. The problem on which the inquiry is based is the lack of knowledge on dental hygienists' experiences during these actions to improve access to care. There is a need to better understand the evolving role of dental hygienists as adult learners and educators within the context of their professional lives. In addition, the process of learning and educating to change systems and policies to improve oral health has not been addressed from the perspective of dental hygienists. The results of this inquiry will advance the scientific body of knowledge and be helpful to dental hygienists and other healthcare professionals who are engaged in actions to improve access to care.

The purpose of the qualitative study was to understand dental hygienists as adult learners and educators in their quest to reduce health inequities and improve access to care. The intent of this article is to share the grounded theory analysis resulting from open and focused coding procedures and the participants' rich stories from which the analysis was constructed. Theoretical coding and the resulting theory from the grounded theory analysis will be discussed in a subsequent publication.

Review of the literature

A comprehensive review of the literature before conducting a grounded theory inquiry is not recommended (13–15). Researchers need to remain open to concepts emerging from the data rather than forcing the concepts into an established structure (13–15). However, a theoretical perspective provides a lens in which to view the inquiry (16).

The theoretical perspectives used as a framework for this qualitative inquiry were adult learning and critical theory. Adult learning theory according to Lindeman views learning as a lifelong process occurring in the context of experiences and situations arising from daily living (17). These experiences and situations provide a rich resource for learning. 'Experience is, first of all, doing something; second, doing something that makes a difference; third, knowing what difference it makes' (17). Adult learning provided the framework to view the dental hygienists' experiences to improve access to care within the context of their careers as practitioners and members of the professional association.

From a critical theory perspective, learning was focused on recognizing dominant beliefs and systems; unveiling the power of social, political and economic forces; challenging dominant beliefs and systems; changing the status quo; and envisioning a brighter future maximizing freedom, fairness, compassion

and justice (18). Critical theory provided the framework to view actions as a *struggle* between dental hygienists to improve access to care and powerful forces interested in maintaining the status quo of the dominant oral health delivery system, namely the private practice model.

Materials and methods

States were selected for inclusion in the study based on the criteria of (i) an expanded scope of practice allowing direct access to dental hygiene care for at least 7 years, and (ii) state Medicaid reimbursement directly to dental hygienists. Three states in the western region of the US were selected: Washington, Oregon and California. Dental hygienists from these states were included in the study based on the criteria: (i) current licensure, (ii) minimum of 5 years as a dental hygienist, (iii) experience as a direct access practitioner or as a contributor to changing systems and policies to improve access to care and (iv) ability to discuss, in detail, their experiences.

Recruitment of participants began after approval from the Institutional Review Board at University of Idaho (UI Number 07-021). An introductory e-mail message was sent to the dental hygiene professional associations in the three states, explaining the purpose of the inquiry and inclusion criteria, along with an invitation to practitioners to participate in the study. The message was forwarded to the respective membership by association leaders and interested dental hygienists contacted the researcher via e-mail. Personal networking within the dental hygiene community was another means of identifying and locating additional participants. Potential participants were sent a screening questionnaire to determine their eligibility for the study along with an initial explanation of the purpose of the study, research protocol and expectations for participation, inclusion criteria and a request for contact information. After receipt of the completed questionnaire and determining eligibility, each person was contacted personally via telephone to discuss the content of the informed consent form and offered the opportunity to ask questions. After verbal agreement to participate, the informed consent was e-mailed for their signature and returned to the researcher. A pseudonym was chosen to replace their names in the written transcripts and other data collection forms. Eight female dental hygienists were included in the study; three resided in Washington, two in Oregon and three in California (refer to Table 1 for demographics of the participants).

Qualitative data consists mainly of words spoken by the participants gathered during a personal interview. The interview was an in-depth exploration of the dental hygienists' experiences as adult learners and educators in the context of improving access to care; five interviews were conducted via telephone and three occurred in a face-to-face situation; however, each was conducted in a similar fashion. An interview guide with open-ended questions, developed by the researcher, was sent to each participant before the interview and served as a basis for the exploration of their experiences in a semi-structured fashion. During the interview, the researcher asked follow-up questions when it was necessary to illicit additional information or for clarification of the participants' statements. The longest interview (1:28 h) and shortest interview (52 min) were conducted over the telephone. Interviews were recorded using an Olympus® digital voice recorder (Olympus Imaging America Inc., Melville, NY, USA) and then downloaded onto a computer using RealPlayer® (RealNetworks Inc., Seattle, WA, USA). Each interview was transcribed verbatim by the researcher, and the written transcript was checked for accuracy with the voice recording before analysis.

Table 1. **Dental hygiene participant demographics**

Demographic	Number of participants
Years as a dental hygienist	
25–26 years	2
30 and more years	6
Employment	
Nursing home practice	5
Public health practice	2
Change agent and private practice	1
Active members of state professional association	8

Data analysis procedures followed the traditional techniques discussed by Glaser and Strauss (13), constructivist grounded theory espoused by Charmaz (16) and supplemental analysis procedures, called situational analysis, developed by Clarke (19). Traditional grounded theory procedures included analysis through coding, constant comparative method, memo writing and theoretical sampling (13). Constructivist grounded theory focused the analysis on the lived experiences of the participants and understanding the meaning of these experiences (16). Situational analysis viewed *situations* as the unit of analysis, and various maps were drawn to show interrelationships, complexities and differences within the data (19). In grounded theory, data collection and analysis occur simultaneously in a cycle instead of a linear fashion. Data were collected until theoretical saturation occurred; categories of data remained unchanged during the analysis, properties and dimensions of each category were well-defined and revealed variation, and the interrelationships between categories were validated (20).

The trustworthiness of the data analysis was established through methods of verification, as opposed to determining reliability and validity in a quantitative investigation. Trustworthiness can be established by applying methods of credibility, transferability, dependability and confirmability (21); however, Creswell and Miller (22) discussed the need for only two methods to ascertain trustworthiness. Credibility of the data analysis was verified by member checks and a peer reviewer. Member checks occurred by participants reviewing the analysis to determine the accuracy of the researcher's interpretation of their experiences in improving access to care. A peer reviewer, who was a colleague at Idaho State University, scrutinized the data analysis to ensure the theory was truly grounded in the data. Confirmability of the data was established by writing memos and constructing maps (using situational analysis) to document thoughts, decisions, questions and interpretations, throughout the analysis.

Coding analysis procedures

Coding is the link between collecting data and constructing an emergent theory to make sense of these data (16). Coding procedures take the concrete statements made by the participants and make analytical interpretations of the data. The purpose of the first coding procedure, initial coding, was to fragment or deconstruct the qualitative data into the smallest elements possible. Deconstruction consisted of assigning a code to individual words, sentences, sections or incidents in the interview data. Initial coding was accomplished by reviewing each transcript word-by-word, line-by-line or incident-by-incident with the intent of creating codes defining actions apparent in the data (16). Whenever possible, *in vivo* names were assigned to the codes using the exact words of the participants. Although the use of *in vivo* codes keeps the analysis grounded in the data, it was not possible to use this strategy for every code; therefore, the researcher created original names in these circumstances.

Focused coding, the second coding procedure, was used to reconstruct open codes into conceptual categories thereby raising the abstract level of the analysis (16). Codes determined to be the most significant were elevated to categories (16). Categories explain larger amounts of data, and categories can become subcategories as larger segments of codes are clustered together (16). As these substantive codes emerged, it was useful to write memos to conceptually define the categories and subcategories, clarify properties establishing the characteristics of the subcategory and identify the dimensions of the subcategory. Dimensions describe the variation of the subcategory along a continuum of participant experiences (20).

Results for dental hygienists as adult learners

The results of the initial and focused coding procedures revealed three categories for the *learning process*: (i) Awareness, (ii) Adaptation and (iii) Relationships. *Awareness* was experienced as developing consciousness of self, status quo, power and injustice of systems. *Adaptation* was constructed from experiences of specializing and creating to adjust to the new environments and prepare future practitioners. *Relationships* were developed to feel connected and collaborate to build support and gain respect to improve access to care.

(i) Awareness

The category *Awareness* was supported by four subcategories: self-awareness, status quo, power and injustice of systems (refer to Fig. 1). The subcategory *Self-awareness* was experienced as dental hygienists became aware of their values, commitment and personal abilities in their actions to improve access to care. Practitioners identified values related to direct access care to underserved populations as a worthwhile endeavour, instead of viewing services as a commodity for financial gain; the underserved population for who they are, in place of preconceived notions; the ADHA as the 'watch dog' to protect the interests of dental hygienists, and advanced education beyond entry level as essential to the future of dental hygiene. Pearl who owned a dental hygiene practice and provided care to nursing home residents discussed her values:

Fig. 1. Learning process: awareness category and subcategories.

I started out questioning everything I did, especially charging for care. I would think, maybe I'll should charge less for this, and I did. It took time to learn to value myself and my work. I found other dental hygienists were feeling this way too.

I feel the dental hygiene association has been the spring board to bringing our profession to where we are today… Without the association's efforts, we would not have the opportunity to own practices.... We need to depend on our association as it monitors legislative and regulatory arenas. Part of our dues pays for our lobbyist to protect dental hygiene practice by monitoring the actions of opponents who would undermine our practice opportunities. That is a real value to our practices.

Participants experienced personal awareness of their commitment to a vision or mission to improve access to care and mentor the future generation of direct access practitioners:

Darla: *I'd like all children to have the disease prevented in their mouths and have an opportunity to go to school and learn well and socialize.*

Pearl: *My goal is to have a dental hygiene practice that is successful. By having a successful business, I am able to provide increased access to care.*

Another characteristic of self-awareness was recognizing personal abilities being challenged as the hygienists provided care to nursing home residents and worked on legislative changes. Emotional, physical and spiritual abilities were stretched to a level beyond the individuals' comfort zone.

The second subcategory *Status Quo* was characterized by developing awareness of the status quo by realizing the stakes of poor oral health in underserved populations, 'bucking the system' as the participants' consciousness was raised for the need to change systems to improve oral health and 'sticking out your neck' as awareness of risks in challenging the status quo. The stakes of poor oral health in underserved populations were articulated by Grace who worked in the public health arena and Hope who provided direct dental hygiene care to residents in nursing homes:

Grace: *People are out there with missing teeth, draining abscesses, potentially life threatening cancers in their mouth and no one seems to care. It's hard to be in that place.*

Hope: *And you may not be aware that we had a nursing home death here in this state. I believe it was somebody who was not referred to either a dental hygienist or a dentist. The physician said the cause of death was a dental abscess.*

Hope: *I don't think anyone has been in [the nursing home residents'] mouths for 6 years. One resident had calculus on her back teeth going down her throat.*

Awareness of the needs of underserved populations influenced dental hygiene participants to change the status quo by 'bucking the system' to improve the oral health delivery system, laws governing the practice of dental hygiene, Medicaid system and dental hygiene education:

Catlover: *It didn't occur to me that it was the* status quo *and that I wasn't supposed to* buck the system*…It just seemed very straight forward to me. If there's a problem with something then let's fix it.*

Grace: *We teach dental hygienists that [private practice] is where their bread and butter is going to come from. Most of my education has been how to serve the private practitioner. The truth of the matter is, we could open that door a little wider and look at serving the public, maybe through a private practice office or maybe through another way. I think that would be grander.*

Fixing current systems to improve oral health was one way to challenge the status quo; however, an alternative solution was to embrace a new delivery system, namely the Advanced Dental Hygiene Practitioner (ADHP), as a mid-level provider:

Catlover: *I think that this [ADHP] model and embracing this model has given this profession a lot more room to educate themselves, to seek education, and to break out of this glass ceiling of the practice of dental hygiene in the United States that's been artificially imposed.*

Dental hygienists who challenged the status quo experienced risks articulated as 'sticking out your neck'. Taking risks meant the possibility of harm or loss to the individual practitioners or their dental hygiene practice. Personal risks were experienced as threats against hygienists and being labelled as a radical or trouble maker when others found out the hygienists were challenging the status quo by providing direct dental hygiene care or working on legislative initiatives to expand the scope of practice:

Pearl: *All of us were pretty quiet about our practices when we started up….I chose a business name that I could hide behind. It was hard to hear stories from the opposition [dentists] referring to us as a small group of radical bitches who want this [direct access]. It takes courage to make changes. It takes that to advance our profession. Although we still have a long way to go.*

Financial risks were experienced by hygienists who owned direct access practices or were active in legislative initiatives. Owning a business was a financial risk based on the initial capital outlay of money for equipment and reimbursement for services rendered. Attrition of dental hygiene practices occurred when reimbursement problems were experienced. One participant who was an active leader in advocating for independent practice legislation was 'black-balled' from being employed in her community. Another politically active dental hygienist had a complaint filed against her practice by a dentist and spent a tremendous amount of 'energy, time, and finances to solve'.

Recognition of Power was the third subcategory of awareness which was defined as developing a consciousness of power as a strength, force or ability to control a situation. The characteristics of recognizing power included developing a consciousness of personal power, collective power and dental power. Personal power was experienced as power in action to make a difference in the oral health of underserved populations and in the legislative arena:

Darla: *It is wonderful [to see this child] who is just a wilted thing get dental care and blossom like a flower. It is an amazing change to watch….I saw a child today who is autistic and it took 2 years to work in her mouth and now she's become a little flower that's blossomed.*

Catlover: *I went into the legislative arena pretty jaded, thinking that money rules, and that there's nothing one person can do to make a change. I found out that one person* can *make a difference, one person at a time, or have an influence at least. Ultimately it could add up to something.*

Collective power, meaning strength in numbers, was experienced by hygienists as they participated in professional organizations in dental hygiene and outside of the profession such as coalitions, task forces or advocacy groups to improve oral health. This power was developed by establishing a collective consciousness for change within the group which stimulated collective action to collaborate on achieving improvement in oral health:

Darla: *I had the ear of people who could make a difference. I put together a fluoride varnish proposal and brought some science to show that we need to do more than one fluoride varnish in a year for it to be an evidence-based cavity preventing intervention. This proposal was adopted by our state coalition and our state dental director and others went to [the state capitol]. In a very short amount of time Medicaid reversed their decision to limit the fluoride varnish…. We made a difference.*

Dental hygienists were keenly aware of the dental power exercised by dental practitioners and dental associations to control the direction of the dental field and place roadblocks in the way of dental hygiene efforts to improve access to care:

Hope: *It's a control issue. It can't be possible they think we [dental hygienists] are going to steal patients, because nobody is seeing those patients any way. They [dentists] really don't want the patients….They see an unsupervised hygienist as having control and being a gatekeeper and they use that term. They do not want anyone except a dentist to be the gatekeeper for the patient….and if they actually allowed us to be the gatekeepers, it would be hard on them from a national level.*

Catlover: *There are actually dentists who* hold kids for ransom*….When we refer the kids to dentists it's been fairly common for dentist to tell the parents of the children that they're not being served well by the hygienist and that they're better off with the dentist taking care of them. Some dentists even have gone so far to say, if*

you let your children go back to see the hygienist in the school program, think again, I won't see them any longer.

The power of the state and national dental associations was experienced in the legislative arena as well, to thwart lawmaking efforts of the dental hygiene association to improve access to care. The participants viewed the source of their power as a result of the dental associations' strong Political Action Committee and financial contributions to state legislators:

Catlover: *Ultimately it was only the lies and the big money from the American Dental Association that defeated us [in the legislative initiative].*

The fourth subcategory of awareness, *Injustice of Systems*, was based on experiences with the unfair political system and dental insurance system. This realization came to fruition as dental hygienists advocated for oral health programs and legislative changes to improve oral health:

Grace: *We as a state and nation have lost something essential to the fairness of representation. I have experienced presenting a cause for justice and human kindness to notice that others in the room, by a winking and a nodding, were setting the outcome of my request to the decision makers….my faith in the system is cynical now. The unabashed influence of the wealthiest political action committees are buying decisions, and trading in back rooms to withhold objections to one decision in trade for support on something else.*

The injustice of the dental insurance system was experienced by direct access hygienists in their effort to receive reimbursement for services rendered from private and public dental insurance entities. Unfair policies excluded dental hygienists from being reimbursed for care provided to insured patients. Another problem was the lack of insurance codes for every dental hygiene procedure legal to provide within the scope of practice. Changing dental insurance codes developed by the American Dental Association was viewed as a challenging task, but one that was greatly needed.

(ii) Adaptation

The second category of learning was *Adaptation*, constructed from the experiences of adjusting to a new environment in order to survive and pass along information to future generation of practitioners (refer to Fig. 2). Dental hygienists adapted to improving access to care by specialization and creativity, which represent the subcategories. The characteristics of *Specialization* included making improvements, overcoming challenges and taking on new roles. Making improvements was experienced by dental hygienists as adapting policies, procedures and strategies to improve organization in new environments of providing care to underserved populations and advocating for legislative change in order to become more efficient and effective in their actions:

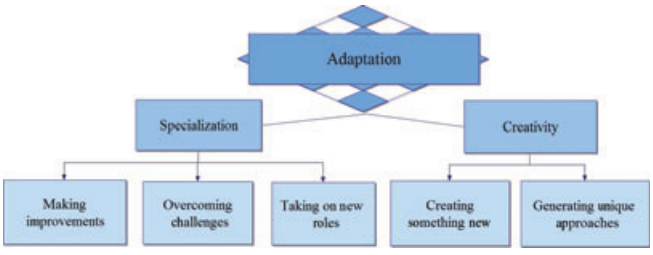

Fig. 2. Learning process: adaptation category and subcategories.

Rachel: *I need to go in and explain to them [nursing home administrators] how I set up my treatment for their patients and what they need to do and what forms they need to help me fill out and consent. It takes a lot of preplanning and the more organized you are in that respect, then once that is received you have a certain person in the nursing home to work with that is interested in helping you. It takes a lot of organization.*

Specialization also required dental hygienists to overcome existing challenges in legislation restricting the scope of practice, insurance reimbursement and economic challenges of managing a dental hygiene practice; whereas, future challenges anticipated by the practitioners were ongoing changes in Medicaid and private insurance reimbursement, equipment maintenance and ongoing challenges to access to care.

Another characteristic of specialization was adjusting to new environments by taking on new roles. Dental hygienists working in long-term care facilities experienced a new role of being a patient advocate for the residents' oral health. In the public health arena, dental hygienists worked with underserved populations, such as Head Start families, to become a 'community linker' to facilitate finding practitioners to provide oral health care. Another new role, experienced by Kona, was a change agent position in a state dental hygienists' association. The change agent worked with the paid lobbyist to initiative legislative change to improve access to care.

Dental hygienists learned to adapt to new environments by being creative and developing something totally new or generating unique approaches to new situations:

Darla: *…when you get hygienists out there and they see the need, they're going to start creatively thinking, how can I do this work? They're going to figure out new ways to do things.*

Pearl: *When dental insurance benefits are denied, I have to let the patient or more typically their family member know this. Often they are not happy with this information. I have encouraged them to contact their insurance companies to complain….I ask them to advocate for themselves and for dental hygienists.*

(iii) Relationships

The third category of learning was experienced as developing *Relationships* to feel connected and collaborate to build support and gain respect (see Fig. 3). Dental hygienists expressed an emotional connection to the populations they served. Participants also felt connected with their dental hygiene colleagues on an individual basis and at an organizational level during professional association activities:

Catlover: *I found myself so empathetic with the people I was working with in that clinic, that I really felt myself* interchangeable *with them. Not only interchangeable, but becoming changed…. It was a different kind of a connection…*

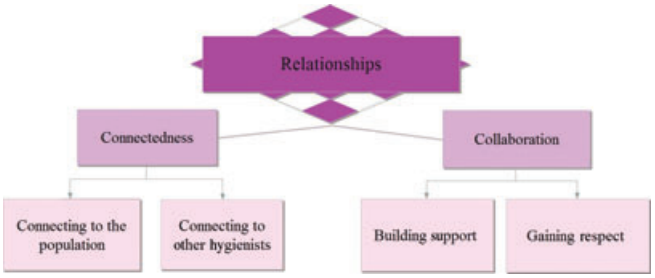

Fig. 3. Learning process: relationship category and subcategories.

Relationships were experienced during collaboration efforts to build support and gain respect for improving access to care, especially important when working on legislative change. Legislators as decision makers preferred a united effort between the dental hygiene association and dental association on bills being considered during the legislative session, as opposed to engaging in a turf war between professions. In some situations, each association had its own agenda and learning to mistrust negotiations was a transformational experience:

Kona: *It was a legislator from a rural area who said in the beginning, get together with the dentists, none of this* turf battle. *We [dental hygiene association] didn't want to have it that way, but it always seemed to turn into a turf battle. Get together with the dentists and that's what we did to come up with the [direct access credential].*

Catlover: *I don't think I mentioned how naïve I was about the political process when I started getting involved, but I was. I am a trusting person. We had many negotiations with the dental association. They would say things that I trusted and they turned out not to be true. It shook me up, but I learned that it's a challenge filtering what you're listening to and hearing and understanding that whoever you're talking to is going to follow their own agenda regardless of what they tell you, particularly in politics. It was a challenge of growing up in that and becoming less naïve as I went along.*

In some instances, mistrust between the two associations was overcome by good communication to build support for the dental hygiene legislation. Collaboration was facilitated by gaining respect, defined as individuals or groups developing a mutual appreciation or sense of worth of each other. Dental hygienists learned that respect was needed from the uninformed public, legislators, advocacy groups, state board of dentistry members, and dentists to support direct access practices and legislation to improve access to care. Support and respect was gained through the educator role these participants fulfilled.

Results for dental hygienists as educators in social action

The coding analysis of dental hygienists as educators in social action revealed one category, Improvement (see Fig. 4). *Improvement* was conceptualized as the process of educating others to enhance awareness, oral health and the dental hygiene profession. Educating for awareness was employed to raise others' consciousness of the population's needs, the dental hygiene

Fig. 4. Educating process: improvement category and subcategories.

profession and legislative issues. Dental hygienists educated others about the needs of underserved populations to individuals and groups who do not come in contact with this population:

Pearl: *I love to get involved with groups that are not dental hygienists because I think it's a great way to provide education about the need for dental care in lower income and special needs groups. Those with middle and upper incomes do not seem to be as aware of this need.*

Grace: *Looking at who I educate, I think it's the dental providers, the privileged people who live in the community don't see outside their private practice door very clearly. I don't think they see the magnitude of [oral health needs].*

Education also extended to advocacy groups, legislators, dental hygiene colleagues and students to raise their consciousness of organized dental hygiene, direct access practice, disparate populations' access problems and the ADHP as a new mid-level provider. Educating others was necessary to build support for legislative endeavours, within the dental hygiene community, as well as within advocacy groups and in the legislative arena:

Kona: *We had no problem at all [getting legislators on our side], just educating them constantly. The health committee people and going to our Lobby Days and explaining to them the problems we're having in accessing these people.*

Rachel: *…you just had to keep constant in why you were doing and what you were doing it for [by having a direct access practice]. Trying to get that point across to whether it was the press, the senators, the assembly, family members, administrators in nursing homes, or corporate people.*

Another aspect of the educator role was improving the oral health of the underserved population in nursing home practices and public health programs. Enhancing the knowledge of support people including family members, nursing home administrators and staff, and public health staff was necessary to improve the oral health of the underserved population:

Pearl: *…I try to teach to the entire team in a nursing home, from the administrator to the janitor. They all need to know about oral health. If they don't, you're not going to have as much effect on oral health. You need everyone's support. For example, the administrator needs to buy better toothbrushes, and you need to be sure the janitor is not passing out hard candy.*

Dental hygienists created materials to educate colleagues interested in becoming direct access practitioners. Two participants were consultants to other dental hygienists interested in starting a dental hygiene practice to served underserved populations:

Pearl: *I have enjoyed consulting with hygienists who are interested in starting their own practices. I have helped them with contracts, forms and computer programs; ideas of what to spend money on and what not to spend on as they start-up. I try to turn-key the paperwork side of their practices because it takes so much time to develop.*

Educating to enhance the profession also involved mentoring dental hygiene students and colleagues to start direct access practices and being a resource person for new direct access practitioners. Mentoring was evident in the establishment of professional organizations specifically for direct access practitioners in two states and in the membership of the Governmental Relations Council for a state association whose purpose was to initiate legislative changes:

Scout: *I think this is what [another direct access hygienist] has seen, is that she is better as a mentor, she can start more seeds as a mentor than she can by going into facilities and working. The way I intend to do it, is now I will become more of mentor for the students….They are the future [direct access practitioners].*

Discussion

Research on adult learning in formal educational settings is abundant in the literature (23, 24); however, inquiries within the context of resolving a social problem have been conducted infrequently (D.M. Chanovec, University of Alberta, Edmonton, unpublished doctoral dissertation, 25). The dental hygiene participants worked to solve the social problem of access to oral health care for underserved populations. Actions taken to solve a social problem are collectively referred to as *social action*. Social action provides a rich environment for adult learning through their experiences (25). Experience in this inquiry was gained by operating a nursing home practice, working in a public health practice and being an active member of the professional association. In these situations, learning occurred as practitioners interacted with other individuals such as dental hygiene colleagues, underserved populations, nursing home administrators and staff, lobbyists, legislators, dental association, dentists, advocacy groups and dental insurance companies.

Critical learning helps move the learner to a heightened state of awareness of injustices (25). The dental hygienists learned critical awareness of oral health inequities, dental power and the injustice of the political system and dental insurance system. Another type of learning, emancipatory learning, is evident in social action movements and spawns action to gain freedom from powerful people and systems, thus taking control of their own lives (18). The dental hygienists experienced emancipatory learning as they struggled to gain autonomy from dental power and the injustice of the dental insurance system. Autonomy was experienced when following their mission and vision to improve oral health. The clinicians who owned dental hygiene practices earned freedom from being an employee in a dental office and viewing the earning potential as a commodity.

Freedom to reach one's full potential and achieve empowerment is a principle espoused by critical theorists to overcome alienation (18). The dental hygienists engaged in social action achieved empowerment by making a difference in the oral health of the vulnerable populations they served and making improvements in laws to improve access to care. Empowerment is an important factor in sustaining social action movements over long periods of time (25, V. Breitbart, Columbia University, New York, unpublished doctoral dissertation). Critical theory also envisions a brighter future organized around the democratic values of freedom, justice, fairness and compassion which are necessary to challenge and change the status quo (18). The dental hygiene participants challenged the traditional oral health delivery system, namely the private practice model, by operating nursing home practices and administering public health programs. The private practice model seems to cater to individuals who are mobile to present at an office, and can afford the cost of care through private dental insurance or have the ability to pay outright. People who lack oral health care and experience physical and mental decline can spin into a 'death spiral' (26). According to Sered and Fernandopulle who travelled to five US states, interviewed uninsured individuals and presented their experiences in *Uninsured in America*:

Most of our interviewees raised the issue of their teeth. Gina, a young hair stylist we met in Idaho, covered her mouth with her hand during our entire interview because she was embarrassed about her rotting teeth. Daniel, the Mississippi construction worker, used his pliers to yank out decayed and aching teeth. Almost every time we asked interviewees what their first priority would be if the president established universal health coverage tomorrow, the immediate answer was 'my teeth' (26).

Most states' Medicaid programs do not provide dental care for adults (28) and as one of the participants in the present study lamented, '*zero* dentists' in the county accepted Medicaid patients. Dental hygienists discussed their vision of justice and fairness to the social problem by envisioning direct access to dental hygiene care, direct reimbursement for all services provided by dental hygienists and the advanced dental hygiene practitioner as a mid-level provider. The participants demonstrated compassion for and felt connected to members of the underserved populations and interacted with them in a respectful manner.

Challenging the status quo did not come without consequences. The power of dentists was used to place roadblocks in front of the dental hygienists' efforts to change laws to improve the scope of practice and directly reimburse dental hygiene practitioners. Dental hygienists who challenged the status quo experienced personal risks and financial risks, which represented the *vulnerability* of engaging in social action. Vulnerability in other social movements was experienced when groups who possessed power, used it to over

groups who struggled to gain freedom from that power (27, 28).

Individual action to engage in a social movement is based on personal values (25). The dental hygienists developed self-awareness of personal values and a commitment to a vision and mission which influenced their action to provide care to the underserved and improve the scope of practice. In addition, they experienced an awareness of collective power as group members developed a collective consciousness, which spurred collective action towards accomplishing a task. The dental hygiene professional association as a collective group became 'much more savvy on how we speak…and who we speak to' as members shared common experiences. Shared experiences, especially unpleasant ones, were useful for planning future action in other struggles to overcome social problems (D.M. Chanovec, University of Alberta, Edmonton, unpublished doctoral dissertation, 25, 27, 28).

Dental hygienists engaged in improving access to care exhibited a strong educator role. They educated within the context of formal dental hygiene educational programs, continuing education courses, nursing home practices, public health practices and dental hygiene associations. The role of educator in these situations involved interaction with others within the dental hygiene community and outside dental hygiene to enhance knowledge to build support and gain respect for changing the status quo. In other social movements, building relationships to gain support was important for feeling connected and establishing a sense of community to sustain the momentum of working towards a common goal (V. Breitbart, Columbia University, New York, unpublished doctoral dissertation, 29).

One criticism of this qualitative inquiry is the small number of participants; however, the interviews generated over 200 pages of transcripts and the patterns in their experiences were striking. The presentation of these experiences provides an opportunity to understand dental hygienists' struggle against powerful forces to improve access to care for underserved populations. Future research can build on this inquiry and expand the scientific body of knowledge in dental hygiene.

Conclusions

Dental hygienists were continually engaged in actions to improve access to care. They were adult learners by using their experiences to develop awareness, adapt and build relationships within the context of social action. A strong educator role was necessary to make improvements in access to oral health care. Dental hygienists interacted with colleagues and individuals or groups outside of the profession to enhance awareness and gain support for changing the status quo and reducing health inequities. The processes of learning and educating were intertwined throughout their experiences in social action and both were integral to improving access to oral health care. Momentum must be maintained to sustain action in the ongoing struggle to reach the oral health objectives of the national health initiative.

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References

1 U.S. Department of Human Services. *Healthy People 2010*. Washington, DC: U.S. Department of Health and Human Services; 2000.
2 U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services; 2000.
3 Mundt MH. Exploring the meaning of ''underserved:'' A call to action. *Nurs Forum* 1998; **33:** 5.
4 Institute of Medicine. *The Future of the Public's Health in the 21st Century*. Washington, DC: National Academic Press; 2003.
5 Shi L, Stevens GD. *Vulnerable Populations in the United States*. San Francisco, CA: Jossey-Bass Publishers; 2005.
6 U.S. Department of Health and Human Services. *A National Call to Action to Promote Oral Health*. Rockville, MD: U.S. Department of Health and Human Services; 2003.
7 Palmer PR. ADHA supports initiatives of national call to action to promote oral health. *Access* 2003; **17:** 10.
8 American Dental Hygienists' Association. *Dental Hygiene: Focus on Advancing the Profession*. Chicago, IL: American Dental Hygienists' Association; 2005.
9 American Dental Hygienists' Association. *Direct Access States*. Chicago, IL: American Dental Hygienists' Association; 2010. Available at: http://www.adha.org/governmental_affairs/downloads/direct_access.pdf (accessed 10 December 2010).
10 U.S. Department of Health and Human Services, Health Resources and Services Administration. The professional practice environment of dental hygienists in the 50 states and the district of Columbia, 2004. Available at: http://bhpr.hrsa.gov/healthworkforce/reports/hygienists/dh1.htm (accessed 10 December 2010).
11 American Dental Hygienists' Association. *States which Directly Reimburse Dental Hygienists for Services under Medicaid Programs*. Chicago, IL: American Dental Hygienists' Association, 2010. Available at: http://www.adha.org/governmental_affairs/downloads/medicaid.pdf (accessed 10 December 2010).
12 American Dental Hygienists' Association. *Bylaws. Code of Ethics*. Chicago, IL: American Dental Hygienists' Association; 2006.
13 Glaser BG, Strauss AL. *The Discovery of Grounded. Theory Strategies for Qualitative Research*. Hawthorne, NY: Aldine Publishing Co; 1967.
14 Glaser BG. *Theoretical Sensitivity*. Mill Valley, CA: Sociology Press; 1978.
15 Glaser BG. *Emerging vs Forcing: Basics of Grounded Theory Analysis*. Mill Valley, CA: Sociology Press; 1992.
16 Charmaz K. *Constructing Grounded Theory*. Thousand Oaks, CA: Sage Publications Inc; 2005.
17 Lindeman EC. *The Meaning of Adult Education*. New York: New Republic; 1926.
18 Brookfield SD. *The Power of Critical Theory: Liberating Adult Learning and Teaching*. San Francisco: Jossey-Bass; 2005.
19 Clarke AE. *Situational Analysis: Grounded Theory after the Postmodern Turn*. Thousand Oaks, CA: Sage Publications, 2005.

20 Strauss A, Corbin J. *Basics of Qualitative Research. Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks, CA: Sage Publications; 1998.
21 Lincoln YS, Guba EG. *Naturalistic Inquiry*. Newbury Park, CA: Sage Publications Inc; 1985.
22 Creswell JW, Miller D. Determining validity in qualitative inquiry. *Theory Pract* 2000; **39:** 39.
23 Jarvis P. *Towards a Comprehensive Theory of Learning. Lifelong Learning and the Learning Society*. Vol. 1. New York: Routledge; 2006.
24 Merriam SB, Caffarella RS, Baumgartner LM. *Learning in Adulthood: A Comprehensive Guide*. San Francisco: John Wiley & Sons; 2007.
25 Foley G. *Learning in Social Action*. New York: Zed Books; 1999.
26 Sered SS, Fernandopulle R. *Uninsured in America*. Berkley: University of California Press; 2007.
27 Endresen K, Von Kotze A. Learning while being alive: education and learning in the treatment action campaign. *Int J Lifelong Educ* 2005; **24:** 43.
28 Walter P. Adult learning in new social movements. Environmental protests and struggles in the for the Clayoquot Sound rainforest. *Adult Educ Q* 2007; **57:** 248.
29 Parrish MM, Taylor EW. Seeking authenticity: women and learning in a Catholic worker movement. *Adult Educ Q* 2007; **57:** 221.