HHS Public Access

Author manuscript

Gerodontology. Author manuscript; available in PMC 2018 December 11.

Published in final edited form as:

Gerodontology. 2018 December ; 35(4): 339–349. doi:10.1111/ger.12367.

Knowledge and behaviours related to oral health among underserved older adults

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Abstract

Objective: To examine the mouth and body knowledge, beliefs and behaviours of Dominican, Puerto Rican and African American older adults, and their relationships to oral and general health and health care.

Background: In his seminal framework, Handwerker posited that the norms, attitudes and behaviours related to the experience of disease and treatment reflect where patients live and have lived and are seeking and have sought care, along with their webs of social and health relations. This framework guides the analysis for the present study, wherein qualitative data are used to understand mouth and body knowledge, beliefs and behaviours among racial/ethnic minority older adults, ie, why individuals do what they do and what it means to them.

Materials and methods: Focus groups were conducted in Spanish or English with 194 racial/ethnic minority older adults living in northern Manhattan who participated in one of 24 focus group sessions about improving oral health. All groups were digitally audio-recorded, transcribed and translated into English from Spanish, where apt. Analysis involved the classification of evidence from all datasets, organised to identify patterns and relationships.

Results: Four themes were manifest in the data regarding cultural understandings of the mouth, the body and health: (a) the ageing mouth and its components; (b) the mouth in relation to the body, health and disease; (c) social meanings of the mouth; and (d) care of the ageing mouth.

Conclusion: Underserved older adults from diverse cultural backgrounds understand the importance of their mouths to both their overall health and social lives.

Keywords

focus groups; older adults; oral health; qualitative research

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1 | INTRODUCTION

As public health and medical advances have extended the lives of people around the world, the oral health of older adults has emerged globally as a considerable but often overlooked health equity and quality of life concern.[1,2] In the United States, the burden of poor oral health among older adults is disproportionately borne by underserved (ie, disadvantaged with regard to health services because of inability to pay or access care) and racial/ethnic minority communities.[3] Because the Medicare programme for persons aged 65 years and older and disabled adults does not cover routine dental care, many older adults are unable to afford the necessary preventive and restorative treatments they need. Medicaid, a public insurance programme for economically disadvantaged and disabled persons, has variable and often limited dental insurance coverage for adults on a state-by-state basis. For instance, the New York State Medicaid programme provides relatively robust adult dental insurance coverage compared with other US states, yet major barriers to plan utilisation remain. The number of dentists in New York who accept Medicaid is limited, and more complex treatment is not covered. African American older adults are less likely to receive dental cleanings and more likely to have fewer teeth than their white counterparts.[4] Similarly, compared to white older adults, African American and Hispanic older adults are both more likely to report poor self-rated oral health[5] and to have untreated dental disease.[6] Among US adults aged 65-74 years, over one-third (34%) of those living below the federal poverty level are edentulous compared to only one-eighth (13%) of those living above the federal poverty level.[7]

Consistent with ecological models that posit factors at multiple levels influence disparities in access to care and quality of health services,[8,9] increasing the cultural competency of oral health providers at the interpersonal level and improving the oral health literacy of patients at the individual level may usefully advance oral health equity.[10,11] Because the ways in which individuals experience their bodies are culturally patterned, it is important to gain understandings of patient perceptions and beliefs to aptly interpret their reports of oral health care experiences and satisfaction. Especially relevant are research efforts to improve interpretations of the cultural filters patients possess towards realising a more nuanced and in-depth comprehension of factors related to their utilisation of oral health care services and compliance with provider recommendations. This is needed because culture and cognition filter, organise and affect interpretations of all bodily structures, processes and changes.[12]

Beliefs about the body, body images and body concepts reflect psychological experiences of the body that have evolved through life experiences.[13] Thus, the body serves as a frame of reference for interactions with the psychosocial, dental and social worlds.[14] Prior studies of population-specific body concepts have noted multiple layers of meaning ascribed to body parts, as well as complex relationships between scientific understandings of anatomy and physiology and lay understandings of anatomy and physiology (ie, ethno-anatomy and ethno-physiology, respectively).[15,16] It follows that the ways in which individuals and groups assess or interpret visible and physical changes in their mouths may have meanings and associations that influence not only when and how they seek oral health care, but from whom. An examination of these perceptions about the body in general and the mouth in

particular is of both scientific interest and practical importance, especially where it provides insights into the expectations, acceptability and utilisation of dental care.

To date, limited research has been published on the perceptions of older adults regarding their mouths, bodies and dental care.[17] A review published nearly a decade ago of oral health-related cultural beliefs found that the majority of the dental literature on racial/ethnic groups was epidemiologic in nature, mainly demonstrating disparities in oral health rather than the oral beliefs or practices of specific racial/ethnic groups.[18] Moreover, the social science literature has largely ignored the mouth.[19] This remains the case today.

In his seminal framework on culture theory, Handwerker[20] posited that the norms, attitudes and behaviours related to the experience of disease and treatment reflect where patients live and have lived and are seeking and have sought care, along with their webs of social and dental relations. Variations and changes in life experience lead individuals to see the world differently and to work with distinctive bodies of knowledge influenced by age, gender, economics, education, mobility, illness experience and other characteristics that influence patient perceptions of treatment and self-care options and decisions.

An additional component of the Handwerker[20] cultural theory model is the assumption that no individual possesses or participates in a single culture. Rather, individual configurations contain elements shared with others. That is, shared national, racial/ethnic, experiential, dental and historical elements combine to influence and shape patterns of behaviour and responses to, for example, care options, alternatives and obstacles. This framework guides the analysis for the present study, wherein qualitative data are used to understand mouth and body knowledge, beliefs and behaviours among racial/ethnic minority older adults, ie, why individuals do what they do and what it means to them. We sought to identify salient themes among underserved older adults, not to compare them by cultural identity.

2 | MATERIALS AND METHODS

The idea of examining the mouth and body knowledge, beliefs and behaviours of racial/ethnic minority older adults emerged from the experience of the first author (MGS) in conducting focus groups from 2013 to 2015 in northern Manhattan, New York, NY. Details of the recruitment and data collection methods utilised in this qualitative study have been included in a series of papers that emanated from the accrued data.[21–24] Materials and methods that are central and specific to the current study are detailed below.

2.1 | Ethical safeguards

The Institutional Review Boards at the Columbia University Medical Center [protocol AAAL4104(M01Y05)] and the New York University School of Medicine (protocol i12-02947_CR5) reviewed and approved all study procedures. All applicable Health Insurance Portability and Accountability Act (HIPAA) safeguards were followed in the conduct and analysis of this study.

2.2 | Study eligibility

To be eligible to participate in the focus groups, participants had to meet the following criteria: (a) aged 50 years and older; (b) attended a senior centre or another community location where older adults gather in northern Manhattan, New York, NY; (c) speak fluent English or Spanish; and (d) self-identify as Dominican, Puerto Rican or African American. To ensure geographic representation of northern Manhattan, approximately equal numbers of participants were recruited from senior centres in each of three northern Manhattan neighbourhoods: Washington Heights/Inwood (largely Dominican), East Harlem (largely Puerto Rican) and Central Harlem (largely African American).

2.3 | Data collection

A total of 24 focus groups were conducted: 12 groups of women and 12 groups of men. In each gender block, four groups were conducted with Dominicans, four groups were conducted with Puerto Ricans and four groups were conducted with African Americans. Ten of the groups were conducted in English and 14 of the groups were conducted in Spanish (two of the Puerto Rican groups were conducted in English). Within each gender/ethnic group, half of the groups were conducted with women and men who had received oral health care in the past 12 months (either at the senior centre or elsewhere) and the other half were conducted with women and men who had not received oral health care in the past 12 months. Once a sufficient number of potential participants were recruited, all participants who met the criteria for a desired group (eg, woman, African American, English-speaking, had not received dental care in the past 12 months) were contacted and invited to participate in a focus group session.

Focus groups were facilitated in Spanish or English as per the preferences of the participants for the Dominican and Puerto Rican groups and in English for the African American groups by one of two senior qualitative experts, one of whom spoke fluent Spanish (MGS). Participants were administered an informed consent form individually before the session began. Literacy was not assumed; thus, in many groups, consent procedures were presented orally by the facilitator. Groups were conducted in community-based facilities, in confidential and comfortable settings. To facilitate a conversational environment, a catered meal and beverages were provided prior to the start of each focus group. All groups were digitally audio-recorded and transcribed for analysis. Groups that were conducted in Spanish were first transcribed in Spanish and then translated into English.

Next, the assembled researchers and older adults participated in a semi-structured focus group interview using techniques that were originated by Merton et al[25] and elaborated on by Krueger and Casey.[26] The groups were conducted using an interview guide, also known as a questioning route,[26,27] that consisted of a series of semi-structured questions[25] designed to explore the community-, interpersonal- and individual-level factors that serve as facilitators or barriers to obtaining oral health care (available upon request from the authors).[9] This type of interview is particularly useful where communication skills are limited, due in part to the perceived status differential between the target population and the researchers, and also because individuals may be suspicious or concerned about the interview.[28]

The researchers were attentive to concerns regarding the validity of the information and thus cultivated candid discussions that were clear and involved a minimum of interruptions, towards better ensuring accurate audio-recording. Because focus groups do not seek to obtain individual data but rather group data, and because these sessions sought to obtain community norms rather than personal histories, the group interview process fostered the sharing of information with peer support, which may not be attained in an individual interview format.[27] The data obtained from these sessions provided insights into the meaning of the behaviours and events to members of each target group, helped to establish a range of knowledge, beliefs and attitudes held, illustrated points of disagreement and interaction and provided a group (normative) reaction to the topics covered.

The larger research project recognised the importance of race/ethnicity and culture on the experiences of older adults with regard to oral health and health care. Information pertaining to the mouth and body knowledge, beliefs and behaviours of racial/ethnic minority older adults was thus captured, even though participants were not asked directly about these topics.

2.4 | Data analysis

Analysis of the focus group data began during data collection in the form of note-taking by members of the research team who were present for the sessions, and review of the recordings and transcripts. The assessment of the quality and completeness of these data in relation to the key research questions was an ongoing process. For instance, to ensure accurate transcription and translation, the bilingual (Spanish/English) project coordinator and other members of the research team, compared the transcripts to the audio-recordings. Once all 24 focus groups were completed and the transcripts were available in English, data analysis then involved the classification of evidence from all datasets, organised to identify patterns and relationships.

In addition, the existence of rich textual data from the focus groups encouraged the research team members to revisit the transcripts to answer new, related questions. This form of secondary data analysis provided a way to extend the context of our research in order to explore and interpret additional aspects of our own collected qualitative data.[29]

In the case of the present study, two of the authors (MGS and SBB) re-reviewed the transcripts to identify key words, terms or phrases that identified discussions by participants regarding their knowledge, beliefs and behaviours related to the anatomy and physiology of the mouth in particular, and the body in general. The third author (MEN) independently reviewed the transcripts to identify the quotes and verify the groups from which they were derived.

3 | RESULTS

The demographic characteristics of the focus group participants for the total sample and by gender are presented in Table 1.

Slightly more than half (53.6%) of the participants were women and about one-third (35.6%) self-identified as Dominican, just under one-third (27.3%) self-identified as Puerto Rican and just over one-third (37.1%) self-identified as African American. In accordance with the sampling strategy, no significant differences were found between women and men for age, race/ethnicity and time of last dental visit.

Findings from the focus groups are presented next by four major themes: (a) the ageing mouth and its components; (b) the mouth in relation to the body, health and disease; (c) social meanings of the mouth; and (d) care of the ageing mouth. As there were no salient differences by race/ethnicity, gender, whether or not participants reported receiving dental care in the past year, or language in which the focus group conversation was held, quotes are identified by group only (a key is provided in Table 2).

3.1 | The ageing mouth and its components

Participants provided detailed descriptions of the mouth and its various components, including teeth, gums, the tongue, saliva, breath and nerves. The mouth was viewed as the orifice providing entrance to the body, and crucial in affecting every state along the continuum from health to disease. As one of the participants noted, “But the mouth is the main thing. That’s why it’s the main thing. Everything comes through in that way.” (Group 5)

The subject of teeth emerged frequently throughout the discussions, regardless of the specific questions presented to the groups. Teeth were the fundamental perceived aspect of oral health and even at times of general health, for both self-care and health services.

> …If you have bad teeth and you neglect it, all of your teeth fall off.
>
> (Group 6)

> if you have healthy teeth your body is healthy.
>
> (Group 18)

Participants held perceptions both about individual teeth and their interrelationships. One participant stated, “a tooth is a bone.” (Group 20) Another articulated the interrelationships among teeth as, “…because one tooth can affect the other tooth and the other tooth and the other tooth.” (Group 9)

Certain participants mused that it is beneficial for individuals to retain their teeth in statements such as: “And, what a precious thing it is to have your teeth. So, I’m trying to hold onto mine…” (Group 1) Most participants, however, expressed the belief that tooth loss in older adults is the norm, including: “Well, the majority of older folks, because of age, lose a lot of teeth.” (Group 21) One participant described her own situation by saying, “But I am sixty years old and there are so few teeth left, you know…because of the age but it’s not because of neglect.” (Group 14) Another explained: “Now, I was eating something the other day [laughter] and a tooth came out. So I said, ‘Well, that’s a tooth!’” (Group 17)

Both women and men, with and without recent dental care, expressed acceptance of tooth extraction in old age.

> Or you may have to have all of your teeth extracted because there is a gum disease underneath.
>
> (Group 8)

> I visited a dentist about three months ago. To take out a tooth and they took out the tooth and I was satisfied.
>
> (Group 5)

> …look: I don't have that much to chew. Pull the teeth.
>
> (Group 9)

Along with tooth loss, tooth decay and deterioration were also discussed.

> Some of us still have our teeth but they are decaying because of age. You have too many caries. Dental problems with your gums. But that comes with age. We all go through that.
>
> (Group 5)

Given the pervasiveness of missing teeth, issues around dental prosthetics were frequently discussed, with many participants describing problems with their dentures.

> They brought my dentures and they looked nice, I mean the teeth were fantastic. But they hurt. They hurt so bad that I didn't want to put them on.
>
> (Group 20)

> So now that I put [on] my dentures my body rejects the dentures so when I try to eat my food, I get sick.
>
> (Group 20)

> …the difference being that with old dentures—one which is 7,8 or 9 years [old]—you can't eat hard things, only soft things.
>
> (Group 22)

The gums were also frequently discussed in the focus groups. Many participants described the poor and often painful conditions of their gums with comments such as, "…my gums are very eroded." (Group 10) and "…I still hurt in that gum after all of these years." (Group 10)

Certain participants expressed confusion about gum disease. For instance, one man shared: "A lot of people are affected by gum disease. How it happens: ain't nobody knows for sure but there's a lot of folks that have perfectly good teeth but those gums are horrible. And nobody addresses it." (Group 17) Others attributed the prevalence of gum disease to the ageing process: "Dental problems with your gums. But that comes with age. We all go through that." (Group 5) Specific theories of gum damage were also proposed, including:

> When a tooth decays, it causes friction and burns your gums.
>
> (Group 2)

> [Alcohol] could soften your gums and when your gums are soft, your teeth loosen up and more fat enters] your gums…

(Group 24)

Participants also described strategies adapted for eating, including an edentulous man who shared, "…I trained myself to eat rice, beans, pork—anything I could eat it without no teeth." (Group 20)

Gums were also thought to accumulate bacteria and food and be difficult to clean.

> Ah, and the gums also accumulate a lot of bacteria.
>
> (Group 11)
>
> … as much as they clean it, there will be always food left between your gum. And sometimes you can't clean it yourself and you have to go to the dentist frequently at least every two months, three months…
>
> (Group 24)

Bleeding gums were considered to be a sign of lack of proper attention to oral care. One participant explained: "Oral hygiene [is important so]…you won't bleed out of your gums and always be clean." (Group 10) Gum care was explicitly referenced as a reason for seeking dental care, both for those who had their own teeth and for those with dentures.

> Oh, you go to a dentist…if you have an infection in your gums, 'cause that's very important, too.
>
> (Group 20)
>
> And we feel that because we have dentures, we don't need to go to the dentist. Not so.
>
> (Group 9)

The tongue was mentioned by many participants as an important component in oral hygiene routines, most frequently in reference to brushing the tongue.

> The tongue is the first thing you need to wash.
>
> (Group 2)
>
> Because you know, you also need to brush your tongue and brush everything so that energy that you have spent during the day, for that energy to come back after you brush.
>
> (Group 5)

Discussion of oral care brought to mind saliva for certain participants. Saliva was conceptualised as related to the overall health of the body in various ways.

> Because if [your] food is not chewed properly the saliva doesn't release properly and the acids inside don't play your food breaks down properly.
>
> (Group 18)
>
> So, you know when you chew something and you don't take care of your mouth it's bad because any saliva while you are eating will affect you a lot.
>
> (Group 24)

Discussion of the mouth also elicited comments around the imperative of avoiding bad breath for many participants.

> it's just the smell of your mouth you have to watch.
>
> (Group 13)

> That is important, that is what is important: not to have bad breath.
>
> (Group 22)

Participants described being conscious of their own breath, "…you want [your] breath to be fresh because a woman doesn't want to walk around with bad breath…" (Group 18) and that of others, "But many people have bad breath and they don't want to recognize it." (Group 5)

The concept of nerves as a part of the mouth was mentioned by one participant, who considered this knowledge to be common among educated people. "The educated people know that there is a lot, a lot, a lot of nerves inside of your mouth and just by pulling a tooth, by giving an injection, by giving you an anesthesia, they could affect your body, your functions, your whole life…" (Group 18)

3.2 | The mouth in relation to the body, health and disease

Participants articulated understandings of their teeth and mouths not simply as isolated body parts, but as inextricably connected with various body systems. Indeed, both health and sickness were viewed as coming through the mouth and entering the body. As one participant asserted, "Everything that goes through your mouth goes through your body so therefore you need to keep your mouth in clean condition." (Group 18)

The health of the teeth and mouth was thought to be linked to the health and well-being of the rest of the body.

> The more educated you are, the more you tend to take care of your dental health because we know that it affects the whole body.
>
> (Group 18)

> It's very important because oral health can complicate things with other body organs.
>
> (Group 14)

> Most importantly it goes to the heart which is the body's main organ…
>
> (Group 4)

The mouth and teeth were described as being connected to the anatomy and function of other parts of the head, for instance: "From the mouth, number one, the head is an industry, we have eyes, nose, and mouth. And everything must work at the same time." (Group 15)

Another participant explained: "My eyes are affected by my teeth. So, when I, when we talk to people and I tell them, you need to go to the dentist. If you're having eye problems, it has —it all connects. It's all connected." (Group 1) Other group participants endorsed this view.

> But, the problem I find with most of us is that we don't understand the relationship between having teeth and the effect it has on our body.
>
> (Group 1)

> When people have mouth problems—they don't understand the correlation between sight, hearing, smelling, and other things.
>
> (Group 1)

Teeth were also described as, "…actually part of your skeleton system so [it] is only outside but it is connected to your skeleton, your frame so as I was saying, what goes in your mouth what touches your teeth affects your whole body…" (Group 18) The connection between teeth, bones, and disease was explained by another participant as follows: "But when you are diabetic, the bone seems to fade away. And then you chew on something and your teeth will crack." (Group 20)

There were extensive discussions about the relationships among teeth, chewing, the stomach, digestion and health, including the comment: "From the teeth, your internal health depends on your teeth situation. If you don't chew properly, your health deteriorates." (Group 5) Several participants considered the relationship between chewing and health to be mediated by the stomach and the process of digestion.

> If you can't chew on your food well, your stomach will not work as it should.
>
> (Group 2)

> Well. One of the reasons to have good teeth, functioning. That means that you will chew properly. Then your stomach will not have to work so hard if you chew food properly, at least for us.
>
> (Group 11)

> It's more important to have…in other words, to take care of your teeth because with problems there, you can't chew well your food. Then when you swallow you don't digest properly because you are taking them in almost whole. You don't break down the food.
>
> (Group 14)

Bacteria in the mouth were thought to be potentially damaging to the stomach: "Because the mouth bacterias make your whole body get ill. Then that's why you need to maintain a clean mouth, to avoid having your stomach get infected." (Group 10) Poor oral hygiene and oral bacteria were also described as a threat to the heart.

> 'Cause we know that our mouths can give us a heart attack. Can give us a heart attack or stroke so you got to make that sacrifice.
>
> (Group 9)

> I think people need to stress that way more than you talking about, you know, like the bacteria in your mouth and how you are going to infect your heart and all of that other stuff.
>
> (Group 13)

> When you have plaque accumulation, it affects your heart.
>
> (Group 19)

Dental care was likewise perceived to be a potential threat to the heart.

> …you have to be careful, ‘cause anything they scrape over there…They say it goes straight to your blood and it goes straight to your heart…
>
> (Group 13)
>
> If they took out a tooth, that could provoke a heart attack…
>
> (Group 21)

On the other hand, one participant believed going to the dentist would protect the heart.

> …it would move people to go the dentist more, ‘cause if you tell them it’s not just your teeth, and you know, when you are going to the dentist, you are taking care of your heart.
>
> (Group 13)

Bacteria present in the mouth were also described as a potential threat to the brain: “Because if your teeth are bad, your mouth is bad and all the microbes go into your body and from there you could even have a brain stroke.” (Group 10) Oral infections were discussed as leading to infections in the body more generally—and possibly fatally.

> Yes, because if your teeth get infected, so does your body.
>
> (Group 21)
>
> …many times we get infections not because the food is bad or because the food is yesterday’s food and none of that. It’s because our oral hygiene is not up-to-date…
>
> (Group 15)
>
> We had this woman, she had an infection in her teeth…and it killed her.
>
> (Group 18)

Connections between oral health care and cancer were also mentioned by several participants.

> I go [to the dentist] for my health and to avoid a major cancer.
>
> (Group 4)
>
> …if the person doesn’t take care of themselves, their mouths, they could develop throat cancer and then you can’t do anything because you can’t eat, you can’t swallow, you can’t do anything.
>
> (Group 19)

People with diabetes were especially deemed to need dental care, since diabetes was seen as detrimental to oral health.

> …if you do have diabetes, you have to make sure you go to the right dentist.
>
> (Group 17)

> …when I arrived in this country, I came with the teeth like those of a child and everything got damaged because I even have the problem that I am a diabetic.
>
> (Group 5)

3.3 | Social meanings of the mouth

Along with being considered "the main thing" for physical health, the mouth was also described as being central to appearance and presentation of the self. One man noted, "You know, your personality, you know when you open your mouth, people look at you." (Group 20) A woman explained: "Because you know [that] first impression. When you look at a person, bam. First thing is your mouth." (Group 3)

Given its social importance, participants endorsed a desire for the mouth to "look good" and a consequent need to take care of it. Teeth, in particular, were discussed as having notable cosmetic and social functions. There was an indication from both women and men participants that attractive teeth were especially valued by women.

> Women, no matter how old we get, we want to look good. We want to impress.
>
> (Group 1)

> And all the woman they got them beautiful teeth!
>
> (Group 20)

> Women would pay more attention. Women enjoy looking better.
>
> (Group 21)

Nonetheless, men prized attractive teeth, too, including as they aged.

> …I ain't trying to get real old too fast. I wanna have a look, and I want to eat on the side. I need those teeth.
>
> (Group 23)

The absence of teeth was also placed in social context. One participant shared, "The only time I put my teeth in is if I'm going out to somewhere." (Group 3) But lack of teeth was accepted with resignation by participants and their peers, as in the following comments:

> I ain't trying to catch no husband. I done did what I had to do so.
>
> (Group 3)

> I'm married. My kids are grown. I ain't trying to impress nobody.
>
> (Group 1)

> …there's a gentleman in my complex. His wife died about five years ago. He doesn't have any teeth in the top. I said to him the other day, I said, 'When are you gonna get your teeth?' He said, 'She's dead. Why do I need to get teeth?'
>
> (Group 1)

Discussion of oral care elicited both explicit discussion of sex and sexuality as well as an undercurrent of sexual innuendo from the older adult participants. This theme emerged among both women and men focus group participants. As one man admitted:

> Many things go through my mind that are not very helpful because one, it's the mouth, your health. And sometimes you like to go down, you know, on a girl or something.
>
> (Group 6)

A woman participant described the experience of kissing with an older mouth.

> Seriously, when you go to kiss somebody, you don't want to feel nothing like that. Their tongue is probing your mouth and they feel in it your mouth.
>
> (Group 1)

3.4 | Care of the ageing mouth

Because of the importance of the mouth to both physical health and social functioning, oral hygiene was considered to be a priority by many participants, even those without recent dental care utilisation.

> I think hygiene is more important, especially with your mouth. That's where everything starts..
>
> (Group 14)

> For me, the only thing we all have to do is take care of the hygiene of our mouths. That's the foundation, and it doesn't matter if you have or don't have teeth.
>
> (Group 5)

> So I think that hygiene is the most important thing. I take really good care of myself, at 92 years of age, imagine. That's the first thing I do when I get up in the morning, take care of my oral hygiene, that above all.
>
> (Group 22)

Participants described a variety of specific oral care practices and products that they utilised.

> To brush your teeth after each meal, three times a day. Mouthwash.
>
> (Group 10)

> To brush when you get up. First thing. When you eat if you have the opportunity and before going to bed, that's for sure.
>
> (Group 12)

> The brushes, I change them every fifteen or sixteen days. Because brushes pick up bacteria.
>
> (Group 10)

> There's a lot of things you can use. And it's not nothing that you have to buy every day. You know you buy a bottle of Listerine, and that suits you for a while.
>
> (Group 7)

Participants also discussed traditional and home remedies that they used for oral health, ranging from more mainstream products such as peroxide for mouthwash, to more alternative medicine treatments.

> I cured a root canal problem of my own using cotton, populis, myrrh powder, and peppermint oil.
>
> (Group 1)

Certain participants described social determinants of health in relation to poor oral health in their peers.

> I tell him, 'Stop playing hanky panky and go to the dentist to get your teeth taken out.' But since he has no papers, he's afraid he will be deported.
>
> (Group 10)

Participants believed that older adults suffered from deteriorated oral health and thus were in particular need of oral health care.

> The teeth of older people deteriorate because of age. Everything starts to fail. Then that's why you need to be on top of the issue and go to the dentist.
>
> (Group 10)

In many groups, there was also discussion of apathy or indifference to the mouth and oral health among both older adults and younger people.

> A lot of people say, if it's not broke, don't fix it. So if my mouth is not bothering me again, I'm not going to do anything to it.
>
> (Group 8)

> 'Cause you have young people today that has never been to the dentist…And that never gonna go to the dentist. They walk around with raggedy mouth, raggedy teeth, bad breath.
>
> (Group 7)

This indifference was at times described as being limited to the mouth, but was also tied in to the expense of dental care and lack of dental coverage.

> Well, yes, we many times are neglectful when it comes to the mouth. We are careless. It also happens that tooth work is expensive and us, poor people, can't afford it.
>
> (Group 5)

Others believed that as adults age, they become fearful and need assistance in taking care of their bodies and their mouths.

> So then I had to figure out a way to get him to bathe. 'Hey, the water is warm. Let me [do] that, I'll do it softly.' And that's how I managed to bathe him. Because they become afraid of water if they are very old. And I had to convince him to get him to wash his mouth.
>
> (Group 10)

Others attributed the lack of care of the body to habits that persisted throughout the life course.

> Some people never bothered to pay attention to themselves, you know? A lot of people didn't do it when they were younger so when they get older, they don't have a real interest.
>
> (Group 7)

Finally, one participant believed that neglect of oral health among certain older adults was due to fatalism: "And some of them figure they are gonna die tonight." (Group 7)

4 | DISCUSSION

What emerged from a substantial number of hours of focus group discussions with racial/ethnic minority older adults is that the mouth is of central importance to the body, oral and general health and social life. This was true across the three cultural groups studied (Dominicans, Puerto Ricans and African Americans), for both women and men, and among those both with and without recent dental care receipt. The four major themes that were evident in the data are discussed in turn next.

4.1 | The ageing mouth and its components

While teeth were the fundamental perceived aspect of the mouth and oral health, several additional components were considered to be vital, notably the gums, the tongue, saliva, breath and nerves. Nonetheless, most focus group participants readily accepted extractions, even having all of their teeth pulled, when advised of this treatment plan by dentists. This is consistent with the findings of a meta-synthesis of the literature on the influence of culture on oral health-related beliefs and behaviours of older Chinese immigrants, where fatalism is exemplified by the belief that dental caries and tooth loss are inherited conditions and inevitable in old age.[30] This may also be reflective of inequitable experiences of dental care for the poor and elders. As per an earlier report derived from the same larger initiative as the current study, participants experienced problems with affording copayments for care, complicated health and social issues that precluded multiple visits for involved treatment and restoration plans, the lack of affordable dental care facilities close to their homes and confusion about and stigmatisation with Medicaid coverage.[24]

4.2 | The mouth in relation to the body, health and disease

Despite varied levels of knowledge and a range of beliefs about physiology, many participants recognised the relationship of the mouth to the health of their bodies overall. That is, there was a clear awareness in the group discussions that attention to oral health would also prevent general health conditions, notably diabetes, heart disease and cancer. Indeed, oral diseases and non-communicable diseases such as diabetes are closely linked by sharing common risk factors such as excess sugar consumption and underlying infectious and inflammatory pathways.[31] Health promotion offers a mechanism by which older adults may be encouraged to be proactive rather than responsive with regard to their health.[32] In the end, efforts to integrate oral health into general health via the common risk factor approach and renewed emphasis on oral health promotion and disease prevention through interdisciplinary interventions may assist in achieving oral health equity for racial/ethnic minority older adults.[33]

4.3 | Social meanings of the mouth

The mouth was considered to be the literal opening to the rest of the body and clearly served as the figurative door to the social lives of the focus group participants. It was deemed to be critically important not only to appearance and speech, but also to enjoyment of food and sex. As has been previously argued, efforts to improve oral health and advance oral health equity may benefit from a greater emphasis on the socially enhancing objective of healthy teeth and gums and fresher breath.[34]

4.4 | Care of the ageing mouth

The Dominican, Puerto Rican and African American participants in this study were attentive to changes in their mouths and discussed these changes in light of cultural beliefs about what these changes meant and how they might affect the health of other body organs and systems. Changes identified by all five of the senses were frequently interpreted as indications of disease or at least threats to health. Consistent with reports in the literature regarding how traditional Chinese medicine and the related Vietnamese belief system of health and illness guide the approach of older immigrants in identifying oral health problems and influence treatment choices,[30,35] the participants in this study often used traditional practices to treat oral health problems rather than and in addition to professional oral health care services. As per the mission of the National Center for Complementary and Integrative Health, rigorous scientific investigation is needed on the usefulness and safety of complementary and integrative health interventions and their roles in improving health and health care,[36] including dental care.

4.5 | Limitations

The limitations of this study include that the participants were recruited from senior centres and other places where older adults gather in northern Manhattan, New York, NY. Senior centres serve ambulatory older adults, focus on the needs of poor and racial/ethnic minority residents, and provide a range of activities and services. Compared with older adults in New York City overall, attendees at senior centres tend to have both a higher prevalence of chronic conditions and a higher percentage of individuals who report being in poor or fair vs good or excellent general health. Hence, findings may not be applicable to institutionalised older adults or those who are living in other locales. Moreover, participants were not specifically queried about information pertaining to the mouth and body knowledge, beliefs and behaviours. Data addressing these issues were identified initially during the sessions by the facilitator of the Dominican and Puerto Rican groups (MGS), and then by revisiting the detail-rich transcripts with this focus in mind. Thus, information on the knowledge and beliefs of the participants are largely dependent on the group discussions rather than having been elicited by the interview guide. Nonetheless, without efforts to be comprehensive of all groups conducted, quotes from 23 of the 24 focus groups are presented in this paper (only Group 16 is not represented). Finally, the non-representative sample, typical of focus group methodology, precludes generalisability of these findings to other Dominican, Puerto Rican and African American populations.

Notwithstanding these limitations, this qualitative study provides novel evidence of the central importance of the mouth to the physical and social body as explicated by racial/

ethnic minority older adults. A recent report in the literature emphasised that dental students need knowledge of health disparities and community health to better understand the perspectives of culturally diverse populations and to communicate effectively with people from various cultures.[37] It has also been argued in the literature, as well as illustrated by this study, that oral health professionals need to become culturally and linguistically proficient in communicating with and caring for all patients.[38]

5 | CONCLUSION

This study underscores that underserved older adults from diverse cultural backgrounds understand the importance of their mouths to their overall health and well-being. These data also emphasise that older adults value their social lives as well as their health. They view the mouth as the door to the rest of our bodies, and also to our social lives, affecting our appearance, sexuality, speech and enjoyment of food. Being sensitive to culture-bound knowledge, beliefs and behaviours may assist in the imperative of improving health equity for underserved populations.

ACKNOWLEDGEMENTS

The authors thank the participants and recruitment staff whose engagement in this qualitative study made the reporting of the results possible. The authors were supported in the research, analysis and writing of this paper by the National Institute for Dental and Craniofacial Research (NIDCR) and the Office of Behavioral and Social Sciences Research (OBSSR) of the US National Institutes of Health (NIH) for the project titled, *Integrating social and systems science approaches to promote oral health equity* (grant R01-DE023072) and by the NIDCR for the project titled, *Implementing a participatory, multi-level intervention to improve Asian American health* (grant U56-DE027447).

Funding information

National Institute of Dental and Craniofacial Research, Grant/Award Number: R01-DE023072 and U56-DE027447

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TABLE 1

Characteristics of participants in focus groups for the total sample and by gender, New York, NY, 2013-2015

Participants and focus groups	Total sample	Women	Men
Participants	N = 194	n = 104	n = 90
Focus groups	N = 24	n = 12	n = 12

Characteristics	% (n)	% (n)	% (n)
Age group in years			
50-59	14.4% (28)	16.3% (17)	12.2% (11)
60-69	34.0% (66)	32.7% (34)	35.6% (32)
70-79	36.1% (70)	34.6% (36)	37.8% (34)
80-89	11.9% (23)	11.5% (12)	12.2% (11)
90+	3.6% (7)	4.8% (5)	2.2% (2)
Race/ethnicity			
Dominican	35.6% (69)	33.7% (35)	37.8% (34)
Puerto Rican	27.3% (53)	27.9% (29)	26.7% (24)
African American	37.1% (72)	38.5% (40)	35.6% (32)
Last dental visit			
Within past year	54.1% (105)	52.9% (55)	55.6% (50)
1-3 years ago	27.3% (53)	31.7% (33)	22.2% (20)
>3 years ago	18.6% (36)	15.4% (16)	22.2% (20)
Primary language			
English	42.3% (82)	46.2% (48)	37.8% (34)
Spanish	48.5% (94)	45.2% (47)	52.2% (47)
Both	9.3% (18)	8.7% (9)	10.0% (9)

Women and men did not differ significantly on any of the characteristics listed above, in accordance with the sampling strategy.

TABLE 2

Characteristics of each focus group, specifically, race/ethnicity, gender, whether or not participants reported receiving dental care in the past year, and language in which the focus group conversation was held, New York, NY, 2013-2015

Group 1: African American women with dental care in the past year in English
Group 2: Puerto Rican women without dental care in the past year in Spanish
Group 3: African American women without dental care in the past year in English
Group 4: Dominican women with dental care in the past year in Spanish
Group 5: Dominican men with dental care in the past year in Spanish
Group 6: Dominican men without dental care in the past year in Spanish
Group 7: African American women without dental care in the past year in English
Group 8: African American men without dental care in the past year in English
Group 9: African American women with dental care in the past year in English
Group 10: Dominican women with dental care in the past year in Spanish
Group 11: Dominican men without dental care in the past year in Spanish
Group 12: Puerto Rican women with dental care in the past year in Spanish
Group 13: African American men without dental care in the past year in English
Group 14: Dominican women without dental care in the past year in Spanish
Group 15: Dominican men with dental care in the past year in Spanish
Group 16: Dominican women without dental care in the past year in Spanish
Group 17: African American men with dental care in the past year in English
Group 18: Puerto Rican women without dental care in the past year in English
Group 19: Puerto Rican women with dental care in the past year in Spanish
Group 20: Puerto Rican men with dental care in the past year in English
Group 21: Puerto Rican men without dental care in the past year in Spanish
Group 22: Puerto Rican men without dental care in the past year in Spanish
Group 23: African American men with dental care in the past year in English
Group 24: Puerto Rican men with dental care in the past year in Spanish