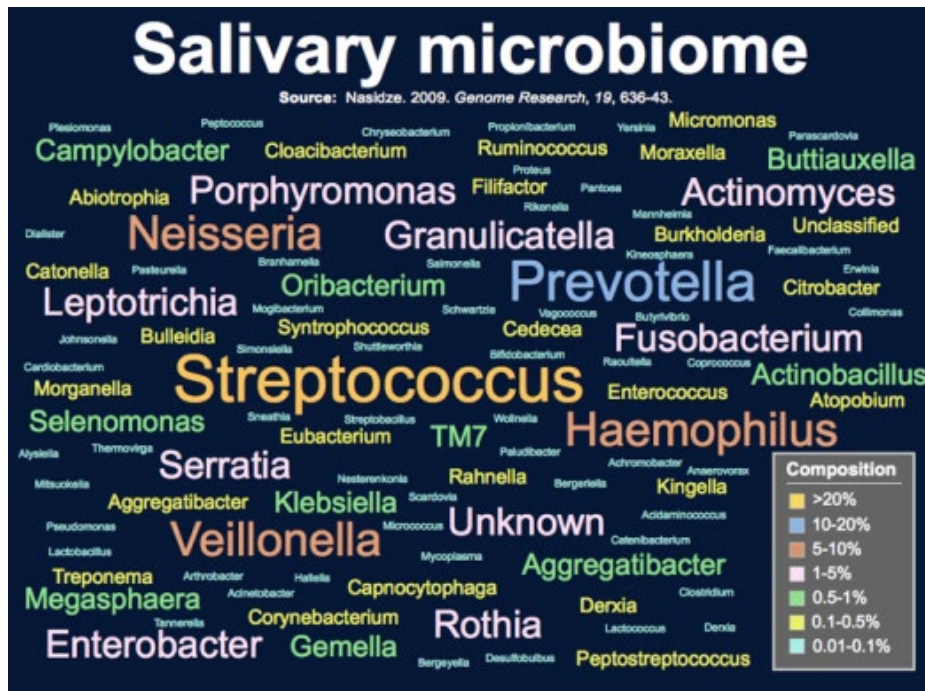


Background

Oral Microbiome

- Diversity of the oral microbiome is second only to that of the colon (1).
- Approximately 1000 commensal species essential to oral health yet responsible for periodontal disease (2).



Periodontal disease

- ~ 50% (64 million) persons age 30 and older have some form of periodontal disease.
 - a bacterial disease-not necessarily an infection.
 - complex interplay of microbes, host response, and factors such as smoking and diet.
 - generally associated with plaque biofilm formation.
 - probiotics have been found to modify, temporarily at least, the microbial habitat (3, 4).

Significance

- Increasing antibiotic resistance.
- Oral health practitioners and patients should be aware of these new therapies.
- This innovative collaboration of South Texas Oral Health Network (STOHN) researchers, practitioners, and community members collaborated to develop health promotion materials for practitioners and community members that is valid and culturally appropriate.

ToPs (Technology of Participation)

- The study used ToPs (Technology of Participation) style consensus building to engage diverse individuals in development of topic generation and organization.
- This collaboration enabled communication which will result in constructing collaborative health promotion material useful for the professional and non-professional environment.

Materials and Methods

Focus Groups

- Health practitioners (n = 12)
- Community members (n = 21)

Recruitment for practitioners included:

- contacted STOHN members via phone and email,
- used of word-of-mouth for other health practitioners
- contacted the San Antonio Dental Society
- contacted the San Antonio Dental Hygiene Association
- newsletters, dental and dental hygiene Facebook groups
- dental school, dental and dental hygiene faculty

Recruitment for community members included:

- flyers distributed at local libraries, laundromats, coffee shops (Local, Starbucks, etc.), UT Health SA campuses
- local newsletters such SA Current
- bulletin boards
- displayed on the marquee at UTHSA
- word of mouth, phone calls
- Facebook and other social media posts, and twitter.

Survey Questions:

- Questions
 - Demographics (see Table 1)
 - Knowledge and awareness of probiotics used for oral health (PBOH; see Table 2)

ToPs Sessions:

- presented an overview of the topic and ground rules.
- participants engaged in focus group discussions.
- conversations by participants were transcribed, coded, and analyzed by theme.

Results

Table 1. Demographics

Total N = 33	Provider n = 12	Community n = 21
Gender		
Male	n = 1 (8%)	n = 4 (19%)
Female	n = 11 (92%)	n = 17 (81%)
Mean Age	51 yrs. old	36 yrs. old
Race		
Caucasian/White	n = 7 (58%)	n = 9 (43%)
Black/African American	n = 1 (8%)	n = 3 (14%)
Asian	n = 1 (8%)	n = 3 (14%)
Other	n = 2 (17%)	n = 3 (14%)
Hispanic/ Mexican/ American Multi-Ethnic	n = 2	n = 2
Alaskan Native/American Indian	n = 0	n = 1 (4.8%)
Do not wish to answer	n = 0	n = 2 (10%)
Ethnicity		
Hispanic/Latino	n = 5 (42%)	n = 9 (43%)
Non-Hispanic/Latino	n = 7 (57%)	n = 10 (48%)
Do not wish to answer		n = 2 (9%)
Education		
High School Diploma/GED or less	n = 0	n = 4 (19%)
College Certificate	n = 0	n = 3 (14%)
Associate degree	n = 1 (8.3%)	
Bachelor's Degree	n = 4 (33.3%)	n = 6 (29%)
Master's Degree	n = 4 (33.3%)	n = 5 (24%)
Doctorate and/or Professional Degree	n = 3 (25%)	n = 3 (14%)

IRB Approval HSC20190178N

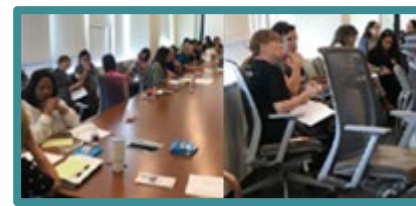
"The project described was supported by the National Center for Advancing Translational Sciences, National Institutes of Health, through Grant UL1 TR001120. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH."

Results

Table 2. Knowledge and awareness for oral health

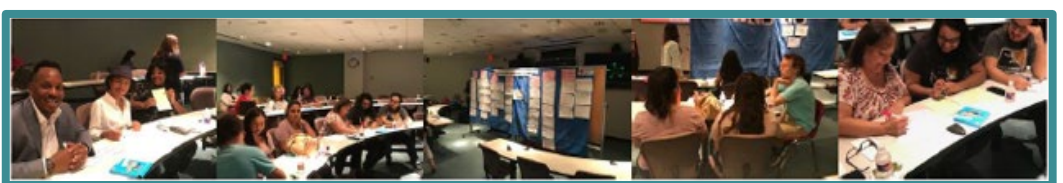
	Providers	Community
Believe PBOH are Beneficial for oral health	Yes 75% Not Sure 25%	Yes 67% Not Sure 33%
Do you recommend PBOH to your patients	Never 67% Rarely/Sometimes 24%	
Your oral health professional recommends PBOH to you		No 76% Yes 5%
Believe PBOH can treat: Bad Breath (halitosis)	agree 75%	neutral 52%
inflamed gums (gingival inflammation)	agree 75%	neutral 52%
gum disease (periodontal disease)	agree 75%	neutral 43%
cavities (caries)	agree 33%	neutral 48%
Would be a beneficial addition to oral care	agree 67%	agree 62%
Feel confident discussing PBOH with their patients	not confident 42% Somewhat/very confident 59%	

ToPs Session: Health Practitioners



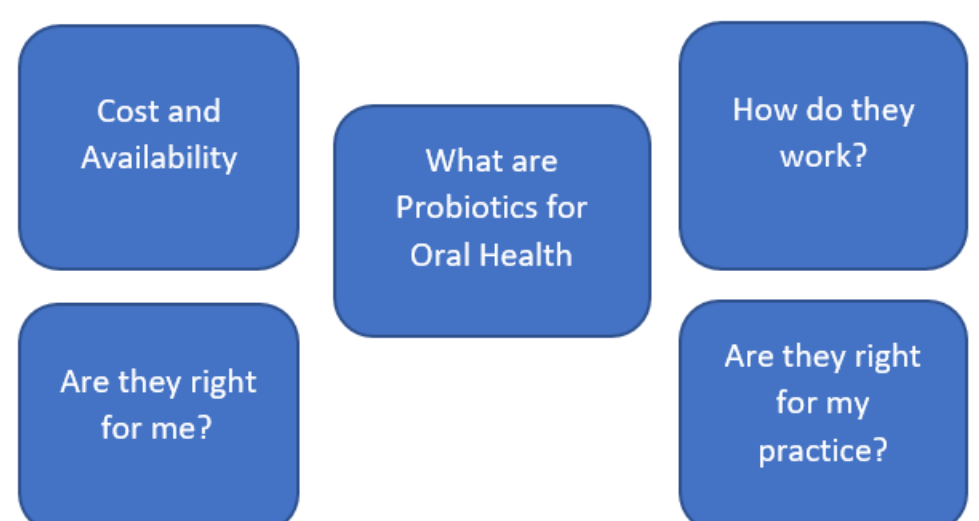
What are probiotics for oral health? How does it work?	Cost of Alternative Care of Oral Probiotics	Information & Facts for oral probiotics	Probiotics as a Natural Approach to Oral Health	Relationship between Diet & Probiotics	Health Promotion through Public Media
What are oral probiotics? Can they be used for other diseases?	Are they more affordable than antibiotics?	What are some evidence-based information that can be included on a fact sheet?	What impact will oral probiotics have on my practice and my patients?	Is diet modification necessary while using probiotics?	What are the best strategies to utilize when educating patients on probiotics? (i.e.: YouTube)
What is the appropriate dosage and frequency when taking probiotics?	Why are they not covered by insurance?	What are some probiotics products that are currently available?	How will probiotics reduce periodontitis and prevent dental decay?	How should I evaluate my patient's diet before recommending probiotics? (i.e.: diet questionnaire)	Can oral probiotics be promoted in social media and public media?
How do they interact with microbiomes in the oral cavity?	How to access probiotics?	What are the delivery methods?	What are the side effects?		

ToPs Session: Community Members



Probiotics for Oral Health 101	What oral health professionals have to say about probiotics for oral health?	Is probiotics right for me?	How can I get more probiotics in my diet?	Accessibility and cost of probiotics for oral health
What is the appropriate dosage and frequency when taking probiotics by themselves or in combination with other medications?	What are some evidence-based information on long-term usage of probiotics?	How to determine if you should not use probiotics?	What are some marketing strategies that would appeal to the masses?	How affordable are oral probiotics?
How to choose between brands?	Would probiotics be considered as preventive or corrective type of treatment?	Which demographic should the materials target?	What are some products containing probiotics that are currently available for consumers?	Can probiotics be purchased over the counter?
What are some effective and interactive ways to introduce probiotics to youth?	Would health professionals recommend probiotics to their patients?			

Major themes from both groups



Analysis of ToPs Sessions

- Formatting of Educational Materials:
 - Fact sheets
 - Best available resources
 - Supported by data
 - Supported by industry
 - Culturally appropriate
 - Displays
 - Brochures/patient information
 - Children's activity/coloring sheet
 - Posters
 - Videos
 - App

Next Steps

Develop educational materials

- Develop fact sheets, posters, children's activities

Face validity

- Professionals and community members will review the materials for usability and validity

Disseminate information

- Provide access to educational materials on the STOHN website

Future research

- Develop future research on specific probiotics and oral health in the STOHN network
 - Long-term
 - Observational
 - Randomized/Control study

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