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Disengagement beliefs in South Asian immigrant smokeless tobacco users: A qualitative study

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Abstract

Gutka and tambaku paan (smokeless tobacco products used by South Asian immigrants) are carcinogenic to humans (and perceived as such), yet, one-fourth of South Asian immigrants report current use. This study examined disengagement beliefs that perpetuate gutka/tambaku paan use among South Asians despite awareness of health risks. Six focus groups were conducted with immigrant South Asian adult gutka/tambaku paan users, in Gujarati, Bengali and Urdu languages in New York, USA. Participants included 39 South Asian adults residing in the New York City Metropolitan area, current (a minimum of weekly gutka or tambaku paan use in the last 12 months) or former (regular use prior to past 12 months) gutka or tambaku paan users and self-reported spoken fluency in Gujarati, Urdu or Bengali languages. Participants identified many health risks associated with gutka/tambaku paan use including locked jaw, high blood pressure and cancer. Five themes of disengagement beliefs emerged: (a) skepticism about the gutka/tambaku paan–cancer link, (b) perceived invulnerability to harm, (c) compensatory beliefs, (d) faith-based rationalization and (e) acknowledgment of addiction. To promote smokeless tobacco cessation among South Asians, interventions to counter disengagement beliefs and heighten the discomfort between the dissonant cognitions represent a promising area warranting further attention.

Keywords

Cognitive dissonance; disengagement beliefs; gutka; paan; smokeless tobacco; South Asians

INTRODUCTION

In some South Asian countries (e.g. India, Bangladesh and Pakistan), consumption of smokeless tobacco products has surpassed rates of cigarette smoking (Secretan et al., 2009) and represents a growing public health problem. Rates of smokeless tobacco use have been reported at nearly 25% in these countries (International Institute for Population Sciences (IIPS), Mumbai and Ministry of Health and Family Welfare, & Government of India, 2010; World Health Organization & Country Office for Bangladesh, 2009). Similar high rates of

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smokeless tobacco use have been reported by South Asian immigrant populations living in the United States (Changrani, Gany, Cruz, Kerr, & Katz, 2006; Glenn, Surani, Chawla, & Bastani, 2009).

Smokeless tobacco products used by South Asians represent various tobacco products containing areca nut, slaked lime, herbs, spices and flavorings (Gupta & Ray, 2003), with gutka (a granulated mixture of chewing tobacco, areca nut, limes, catechu and spices) and tambaku paan (a mixture of areca nut, slaked lime, spices, seeds and tobacco wrapped in a betel leaf) representing the most popular of the smokeless tobacco products consumed by South Asians in the United States (Changrani & Gany, 2005). Unfortunately, use of these products contributes to significant health risks including cancers of the head, neck, throat, esophagus and oral cavity, several non-malignant dental conditions, hypertension, cardiovascular risk and asthma (Gupta & Ray, 2003; Secretan et al., 2009). The World Health Organization reports that nearly 6 million people lose their lives due to tobacco use worldwide each year, with most of these tobacco-related deaths occurring in low- and middle-income countries. Unless strict measures are taken to reduce tobacco consumption, particularly in developing countries, it is estimated that approximately 80% tobacco-related premature deaths will occur among people living in low- and middle-income countries (World Health Organization, 2011). Whereas it is important to prevent cigarette smoking, in order to reduce tobacco-related deaths worldwide (particularly in low- and middle-income countries), it is even more important to develop and enforce tobacco control policies that encompass cigarettes and smokeless tobacco products (Sinha, Narain, Kyaing, & Rinchen, 2011).

Smokeless tobacco use, particularly in the form of paan and gutka use, is unique to South Asians and has not yet permeated to mainstream America. However, bidis (small, thin hand-rolled cigarettes imported to the United States primarily from India and other Southeast Asian countries; Yen, Hechavarria, & Bostwick, 2000) have seen an increased mainstream popularity among U.S. adolescents and young adults (Centers for Disease Control and Prevention, 2010). Data derived from Census Bureau sources by the Asian American Federation Census Information Center 2010 indicates that Asians made up 12.6% of the New York City's population, with Indians, Pakistanis, and Bangladeshis together accounting for 36% of the Asian population (Asian American Federation Census Information Center, 2011). Given the large concentrations and rapidly growing South Asian population in the United States, particularly in New York City, Chicago, Washington DC, Los Angeles and San Francisco-Oakland (South Asian Americans Leading Together and the Asian American Federation, 2012), the potential for South Asian smokeless tobacco products to "crossover" into new population of users cannot be ignored.

The overwhelming majority of tobacco prevention and cessation efforts in the United States have been directed at combustible tobacco products with inadequate attention given to smokeless tobacco use (Glenn et al., 2009). As a result, most of the recent gains in reducing tobacco-related morbidity and mortality have not been observed within the South Asian immigrant community (Changrani & Gany, 2005; Chhetry, Kaur, Khan, & McCarthy, 2008). Only recently have investigators begun to examine gutka and tambaku paan use by South Asian immigrants living in the United States (Changrani & Gany, 2005; Changrani et al.,

2006). Prior research has focused on the prevalence and demographic factors associated with use (Delnevo, Steinberg, Hudson, Ulpe, & Dipaola, 2011; Glenn et al., 2009), the widespread availability and characteristics of betel products available in the United States (Blank, Deshpande, & Balster, 2008; Nair, Bartsch, & Nair, 2004), the social and cultural influences on use (Mukherjea, Morgan, Snowden, Ling, & Ivey, 2012) and the adverse health consequences of gutka/tambaku paan consumption (Blank et al., 2008; Javed, Chotai, Mehmood, & Almas, 2010).

Despite these epidemiologic findings, consumption of gutka and tambaku paan is high, as reported in two community-based studies (Changrani et al., 2006; Glenn et al., 2009), and one study describing tobacco use by South Asians in the United States at the population level (Delnevo et al., 2011). Lack of knowledge does not provide a credible explanation as awareness of the oral cancer risk of gutka and tambaku paan use is high among South Asian immigrants (Changrani et al., 2006; Mukherjea et al., 2012). What other factors might explain the apparent discrepancy between knowledge of oral cancer risks and persistent consumption of gutka and tambaku paan among South Asian immigrants?

Two bodies of prior literature and theoretical approaches help explain this contradiction. First, cognitive dissonance theory (Festinger, 1962) provides the most convincing theoretical framework for explaining this apparent contradiction between knowledge of health risks and smokeless tobacco use behavior. Cognitive dissonance theory states that individuals seek consistency among their cognitions (i.e. beliefs, opinions, behaviors). Inconsistent cognitions create psychological discomfort (a.k.a. cognitive dissonance) that motivates people to alter one or more of their cognitions to restore consistency (Festinger, 1962). For example, to lower cognitive dissonance, a smoker might emphasize beliefs such as “I know non-smokers who got lung cancer”, thereby de-emphasizing the fact that smoking is the leading risk factor for lung cancer. These forms of rationalizations for continuing smoking are known as disengagement beliefs (also termed cognitive rationalizations, self-exempting beliefs or permission-giving beliefs) and are considered to be modifiable with targeted health communication messages. Prior research with smokers provides evidence for the ubiquitous nature of disengagement beliefs (Chapman, Wong, & Smith, 1993; Heikkinen, Patja, & Jallinoja, 2010; Kleinjan, van den Eijnden, & Engels, 2009; Oakes, Chapman, Borland, Balmford, & Trotter, 2004)

Second, literature on risk perception processes suggests that risk perceptions play an important role in adoption of cancer early detection and risk reduction behaviors (Jackson & Aiken, 2000; McCaul, Branstetter, Schroeder, & Glasgow, 1996; Robinson, Rigel, & Amonette, 1997; Vernon, 1999) but salient gaps remain for examining risks among South Asian gutka and tambaku paan users. Risk perceptions involve an individual's belief about the probability of personal harm provided that no protective action is taken (Weinstein, 2000). Two distinct aspects of risk perceptions have been examined in the literature: (1) perceived risk, commonly measured as the perceived level of likelihood, or statistical chance, that illness will occur (Hay et al., 2002), and (2) risk attributions, which include those factors that a person believes contribute to increased or decreased risk (Hay, Shuk, Cruz, & Ostroff, 2005). This study was based on the first theoretical premise, that is,

cognitive dissonance theory, and was designed to identify disengagement beliefs that perpetuate gutka and tambaku paan continued use among South Asians.

METHODS

Participants and procedures

To explore perceptions related to health effects of gutka or tambaku paan use and disengagement beliefs, six focus groups were conducted in the Fall of 2011 with 39 South Asian adults residing in the New York City Metropolitan area. The Institutional Review Board at Memorial Sloan-Kettering Cancer Center reviewed and approved this study. Participants were included if they self-identified as adults (over 18 years), South Asian (origin from India, Pakistan or Bangladesh), current (a minimum of weekly gutka or tambaku paan use in the last 12 months) or former (regular use prior to past 12 months) gutka or tambaku paan users and reported spoken fluency in either Gujarati, Urdu or Bengali languages. Given the number of languages spoken among South Asians in the New York metropolitan area (Asian American Federation, 2012) including Hindi, Urdu, Gujarati, Marathi, Bengali, Sindhi, Tamil, Sinhala, Malayalam and Punjabi, we chose Gujarati, Urdu and Bengali to capture the most diverse demographic representation of gutka or tambaku paan users in this area (Changrani et al., 2006). To ensure sufficient data for saturation of themes (Krueger & Casey, 2009; MacDougall & Fudge, 2001), we conducted two focus groups for each language group resulting in six focus groups overall. All focus groups (except one all women focus groups, conducted in Bengali) were conducted with male participants. Given the higher rates of gutka/tambaku paan use in male South Asian immigrants (Changrani et al., 2006; Delnevo et al., 2011), we anticipated greater male participation when inviting interested participants in our mixed-gender focus groups, but were surprised with the voluntary exclusion of women participants from all (but one) focus groups. Women from Bangladesh ($n = 5$) participated in an all-female focus group.

Recruitment and data collection

The participants were recruited by our community-based partner organization, South Asian Council for Social Services (SACSS). SACSS is a non-profit organization that provides services to underserved South Asian and Indo-Caribbean communities in New York (<http://www.sacssny.org/index.htm>). Community-based recruitment strategies included word-of-mouth, social networking, handing out brochures and in-person contacts at community events and places of worship. Interested participants were informed about the nature of study and invited to a convenient location in the neighborhood for the focus group discussion. Participants were paid \$25 to compensate for their time and any travel expenses.

Each focus group session lasted approximately 90 minutes and was divided into three segments. First, participants provided verbal consent and then filled out a brief anonymous survey. Survey questions included demographic characteristics such as age, gender, country of birth, primary language, length of stay in the United States, education level, spoken English proficiency, employment status and use of tobacco products. Second, focus groups were moderated by trained facilitators at SACSS using a semi-structured focus group guide.

Focus group probes/questions

The moderator discussed the health effects of gutka and tambaku paan use with prompts such as “What can gutka/tambaku paan do to your health?”, “What has your doctor or dentist told you about gutka/tambaku paan use?” and “Are there any benefits of gutka/chew tobacco use that you are aware of?” Several prompts also explored disengagement beliefs. This was accomplished by first narrating a short vignette regarding a hypothetical person’s awareness of health risks yet continuing gutka/tambaku paan use, presented next.

Niranjan Sahay (name changed to tailor scenario to each language sub-group, for example, male from Bangladesh, female for Bangladesh, male from India, and male from Pakistan) started using gutka/paan with tobacco at the age of 20 years in India. In the beginning, it was a recreational activity, but soon became a habitual, daily activity. Although Niranjan was never encouraged by his parents to continue gutka/ paan with tobacco use, he was never seriously discouraged. It was accepted as a way of life. When Niranjan was 25, he found out that his uncle (chacha) was diagnosed with oral cancer. Niranjan was aware that gutka/paan with tobacco chewing had health risks including the risk for cancer, but that did not deter him from continuing use.

Follow-up questions/prompts included “Now, I would like to hear from you why you think Niranjan continued using gutka/tambaku paan?”, “He seemed to be aware that gutka/ tambaku paan use can result in serious health problems, but he continued using gutka/ tambaku paan. Why did he not quit?” and “How might he convince himself that it’s ok to continue using gutka/tambaku paan?” We utilized this narrative approach to emphasize the story character’s dissonant cognitions (i.e. the belief that gutka/tambaku paan is harmful for health and the contradictory behavior of continued gutka/tambaku paan use) instead of alluding to participants’ own dissonant cognitions because we did not want to create psychological reactance (an unfavorable behavioral reaction that occurs when a person feels that his or her choices or range of alternatives is being restricted (Brehm & Brehm, 1981; Kidd & Parshall, 2000). Finally, the focus group moderator debriefed the participants, and answered any questions participants had. All focus group sessions were audiotaped using digital recorders, observed by one of the co-authors (SCB, SB or MK) who recorded field notes. The audiotapes were transcribed and translated by professional services.

Data analysis

Three of the co-authors (SCB, TD, SB) coded each transcript independently, reviewed and discussed their codes and then came to an agreement on the final codes used for analysis (Miles & Huberman, 1994). Summaries were created across all groups and distributed among the three coders for consensus. Overall, there were more similarities as compared to differences between Gujarati, Urdu and Bengali focus groups (and no specific differences or unique themes emerged in all-women Bengali focus group). Therefore, we present the overall themes that emerged. Wherever appropriate, we call attention to the specific differences that emerged. To provide evidence that themes were consistent across focus groups, quotes are identified by the focus group language abbreviation (G, U or B) and participant identifying number (P#).

RESULTS

Table I presents selected demographic details of study participants. Eighty-seven percent of the participants were male ($n = 35$). The mean age of participants was 48.13 years ($SD = 11.22$, Range = 25–71 years). Thirty-nine percent of participants reported India (with Gujarati as primary language), 33% Bangladesh (with Bengali as primary language) and 28% Pakistan (with Urdu as primary language) as their country of birth, respectively. Use of smokeless tobacco products was high, 67% had ever used gutka, 46% tambaku paan, 33% catechu/areca nut and 10% bidi. More than one-third of participants reported combination use of smokeless and combustible tobacco use (36% cigarettes and 5% cigars).

Health effects of gutka and tambaku paan use

Participants discussed many health effects of gutka and tambaku paan including identification of health risks, sharing of personal stories and health benefits of quitting (please refer to Table II for all the relevant and complete quotes that emerged from the data).

First, participants identified many health risks associated with gutka/tambaku paan use including: locked jaw (e.g. "... since the past 20 years, his mouth does not open ..." G-P#1), high blood pressure and related heart problems (e.g. "... coughing a lot and their blood pressure went up a lot ..." U-P#8; "It might cause blood pressure ..." B-P#11) and cancer (e.g. "that it causes cancer ..." B-P#11).

Second, many participants shared personal stories of friends, cousins and family members with cancer. For instance,

My uncle ... First they cut a portion of his tongue and then they cut a little more and finally, he died. (G-P#14)

I used to have a friend called ... in Pakistan ... got diagnosed with oral cancer and as it spread through his body, he got blood cancer as well. (U-P#2)

... my own brother ... he developed cancer due to eating gutka and he died three years ago. (G-P#13)

Finally, one participant who had quit gutka/tambaku paan use discussed the benefits of quitting,

I've benefitted a lot by quitting. I eat more, my jaws no longer hurt although I thought I'd have trouble but it's working great ... (G-P#13)

Disengagement beliefs

Five primary themes regarding disengagement beliefs emerged from the discussion: (1) skepticism about the gutka/tambaku paan-cancer link; (2) perceived invulnerability to gutka/tambaku paan-related harm; (3) compensatory beliefs; (4) faith-based rationalization; and (5) acknowledgment of addiction (please refer to Table III for all the relevant and complete quotes that emerged from the data). Participants from India, Pakistan and Bangladesh expressed similar beliefs related to skepticism about the gutka/tambaku paan-cancer link, perceived invulnerability to gutka/tambaku paan-related harm, and acknowledgment of

addiction. However, the only difference that emerged was that participants from Pakistan and Bangladesh (but not India) discussed the faith-based rationalizations and compensatory beliefs.

Skepticism about the gutka/tambaku paan–cancer link

Some participants clearly reported that they do not believe that gutka or tambaku paan use can lead to cancer or other harmful health effects, for instance,

Because for just a little thing, he wouldn't have cancer (U-P#1)

Participants argued that anybody can get cancer, even people who have never used gutka/tambaku paan. Participants justified their continued usage by sharing stories of people who got cancer without the use of gutka or tambaku paan. Participants also rationalized continued gutka/tambaku paan use by arguing that all tobacco users do not get cancer or other tobacco-related diseases. For instance,

... there's people who get cancer even without ever using tobacco ... (G-P#1)

A girl who has never smoked in her lifetime has cancer too ... Also, many who smoke [or eat gutka] a lot are not affected. (B-P#2)

Perceived invulnerability to gutka/tambaku paan-related harm

Two kinds of arguments exemplified perceived invulnerability to gutka/tambaku paan-related harm. First, some participants shared their notion of cancer being an old person's disease justifying a lack of reason for worrying about gutka/paan use at a younger age. Participants elaborated that younger age is for enjoying present life rather than worrying about future. For instance,

... it's not affecting him and at twenty, who thinks they're gonna get cancer? (G-P#8)

Second, some participants acknowledged that they were aware of gutka and tambaku paan causing health problems in others, but noted that they had not suffered themselves. Therefore, they discounted the evidence, did not perceive themselves as being susceptible to gutka/tambaku paan-related disease, and continued use. For instance,

... And I've never seen a case like that. (U-P#4)

All my life, nothing bad has happened. (B-P#13)

Compensatory beliefs

Whereas some participants acknowledged the harmful effects of gutka/tambaku paan use, they argued that healthy behaviors compensate for any adverse effects. For instance, one participant countered that he uses tambaku paan in limited quantities (or in moderation) and therefore, was not concerned about any harm. Some participants also proposed that by following a healthy lifestyle and exercising, gutka or tambaku paan use will not cause any harm.

... And if you don't have too much, it doesn't affect you. (U-P#1)

The reason for that is, if the person exercises, does some strong work, then the person can digest anything. (U-P#9)

Faith-based rationalizations

This belief was based on the premise that disease (including cancer) is God-given, and acquiring a disease is at God's discretion. Some participants discussed that death was considered as God's will. Therefore, quitting gutka or tambaku paan for health reasons is futile. For instance,

And cancer is God-given ... (B-P#10)

If I have a heart attack, would it be from paan? That's not it. I have it because God has given it to me ... (B-P#13)

Acknowledgment of addiction

Some participants acknowledged that when people are addicted to gutka/tambaku paan, people continue usage despite awareness of risks because of lack of control of their tobacco use behavior. Making this point, one participant shared his own cancer diagnosis, and his inability to quit.

Like me, I have this tobacco addition, even though I know the negative effects of its use, I can't make myself mentally focus on the positive to give it up. (G-P#3)

My jaw has been removed and my face is unbearable to look at and even then, I am not able to give it up. That's the type of addiction that this is and I don't feel alive without it. (G-P#5)

DISCUSSION

This study was designed to explain the discrepancy between South Asian immigrant gutka/tambaku paan users' knowledge of harmful health effects of tobacco use and continued use. Applying principles of cognitive dissonance theory (Festinger, 1962), we explored South Asian gutka/tambaku paan users' formulation of health effects of gutka and tambaku paan use and disengagement beliefs that help justify continued use. Consistent with other research studies (Changrani et al., 2006; Croucher et al., 2002), findings clearly demonstrate a high awareness of negative health effects, particularly oral cancer associated with gutka and tambaku paan use.

Our qualitative study further identified disengagement beliefs that may help explain the inconsistency between continued gutka and tambaku paan usage and apparent awareness of health risks. To summarize the results, five broad themes of disengagement beliefs emerged and included skepticism about the gutka/ tambaku paan-cancer link, perceived invulnerability to gutka/tambaku paan-related harm, compensatory beliefs, faith-based rationalization and acknowledgment of addiction. Disengagement beliefs deter smoking cessation and are inversely related to quitting motivations, intentions and actual quitting behavior (Dijkstra, De Vries, Kok, & Roijackers, 1999; Kleinjan et al., 2009; Oakes et al., 2004). Therefore, public health campaigns or interventions for gutka and tambaku paan cessation will need to develop strategies to challenge disengagement beliefs in order to

motivate quitting attempts. For instance, given that acknowledgment of addiction was utilized as a theme for justifying continued gutka/tambaku paan use, posters displaying successful quitting by tobacco-addicted users may be used as motivational tools to move users along the readiness to quit scale (Abrams et al., 2003).

One of the beliefs that emerged from focus group discussions was compensatory beliefs. In literature, compensatory health beliefs refer to beliefs that healthy behaviors and lifestyle can neutralize unhealthy behaviors and have been examined as one way of understanding people's engagement in health-risk behaviors (Knäuper, Rabiau, Cohen, & Patriciu, 2004). Given that our findings exhibit that compensatory beliefs exist in South Asians for justifying gutka/tambaku paan usage, and prior research demonstrates presence of misperceptions about health benefits of gutka and tambaku paan (Changrani et al., 2006; Glenn et al., 2009; Mukherjee et al., 2012), interventions/campaigns to motivate South Asians to consider quitting may be designed toward debunking these beliefs while providing evidence for the rebuttal.

A different but related approach to better understand South Asian immigrants' gutka/tambaku paan use despite awareness of health risks is to examine oral cancer risk perceptions and risk attributions. In oral cancer risk literature, past research informs that tobacco and alcohol users over age 40 are at highest risk for oral cancer (Smart, 1993), but often do not appreciate their own heightened risk status (Hay et al., 2002; Horowitz, Moon, Goodman, & Yellowitz, 1998; Lowry & Craven, 1999). Therefore, investigating the role of risk perceptions and attributions along with disengagement beliefs will be useful in explaining why knowledge of health risks and risk awareness do not shape tobacco quitting decisions in a consistent manner. This is a ripe area for tobacco control research to reduce tobacco-related disparities (Mukherjee et al., 2012).

This study is not without limitations. The focus group sample was largely male South Asian immigrants from New York, so the results may not be generalizable across all South Asians. Future research should include more women to provide a better understanding of their awareness of health risks, and examine how they rationalize their gutka and tambaku paan use behavior. We utilized a narrative/vignette to explore people's disengagement beliefs for fears of not alienating them from discussions. Approaching the issue more directly may result in different disengagement beliefs surfacing to light, and may be examined in future research. As well, the vignette provided for discussion involved narrative of a young male. Whereas we tried to tailor by changing the name to represent the country he came from, or the sex of the protagonist (for all-female focus group), we did not sufficiently tailor to the age or immigration status of the protagonist. Tailoring the vignette to include narrative of an individual who emigrated from home country of the participants may work better by heightening participant identification with the protagonist and may facilitate better discussion. Finally, this study was limited to two smokeless tobacco products (i.e. gutka and tambaku paan) commonly used among South Asians. Given that other forms of tobacco products are also used by South Asians such as khaini (a mixture of tobacco and lime), naswar (a mixture of powdered tobacco, slaked lime and indigo) and mawa (a mixture of thin shavings of areca nut, sun-dried tobacco and slaked lime) (Gupta & Ray, 2003),

exploring disengagement beliefs related to each of these products will aid in the development of effective smokeless tobacco control efforts for South Asians.

This study has suggestions for a series of studies along gutka/tambaku paan use in South Asians. The results clearly indicated that five kinds of disengagement beliefs emerged from an examination of the existing discrepancy between continued use despite awareness of risks. Whether these disengagement beliefs are similar (or different) among current versus former gutka/tambaku paan users will help explain this discrepancy better. Extending the available quantitative measure of disengagement beliefs (related to smoking) (Kleijan et al., 2009; Oakes et al., 2004) with beliefs specific to South Asians and smokeless tobacco use will help in demonstrating significant associations between endorsement of disengagement beliefs and motivation to quit. As well, the relative contributions of these disengagement beliefs as barriers to quitting motivation and actual quitting behavior must be examined in future work. Given that South Asian immigrants represent the fastest growing racial and ethnic group in the United States (Asian American Federation, 2012), tobacco control efforts must take steps to curtail gutka and tambaku paan use because increased prevalence and easy accessibility are likely to expand the market for tobacco usage and undermine tobacco control.

Finally, our study makes several contributions to the literature and presents implications to inform both research and practice. Incorporating the specific disengagement beliefs that emerged in this study in the existing quantitative measure of disengagement beliefs will make a provision for quantitative inquiry in the role of disengagement beliefs in gutka/tambaku paan regular use and quitting motivations. The existing measures of disengagement beliefs in literature (Kleijan et al., 2009; Oakes et al., 2004) are limited to cigarette smoking. Adapting the measure to South Asian smokeless tobacco contexts and validating it with South Asian smokeless tobacco users will help in developing a valid measurement tool for exploring the process of rationalization and justification of smokeless tobacco use despite awareness of risks.

The findings also provide a foundation for testing novel tobacco control intervention and campaign ideas. For instance, debunking South Asian gutka/tambaku paan users' compensatory beliefs may be one way of increasing their understanding of heightened risk for oral cancer, and may motivate quitting efforts. There have been some recent research advances in social marketing campaigns for tobacco control in India. In 2009, the Government of India, in collaboration with World Lung Foundation and other stakeholders, pretested and developed a 30-second documentary style public service announcement (PSA). The PSA shows an oral cancer surgeon in a cancer hospital, who describes and presents the serious illnesses and disfigurement of his patients (particularly young adults), caused by cancers resulting from use of smokeless tobacco. Evaluation of the campaign with smokeless tobacco users clearly demonstrated that the PSA was well recalled, was relevant to participants, provided new information and got people more concerned about their habit (Murukutla et al., 2012). Our study provides a great resource for adapting such available messages from India to South Asian immigrants in United States, given that the context and environment is different but the behavior and health effects remain the same. Finally, our findings demonstrate that participants from Pakistan and Bangladesh discounted the gutka/

tambaku paan and cancer link by supporting faith-based rationalizations; therefore, involvement of faith-based organizations in tobacco prevention and cessation interventions for immigrants (from these countries) may be a useful tobacco control strategy.

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Table ISociodemographic characteristics of focus group participants ($N=39$).

Characteristic	Total <i>N</i> (%) or Mean (<i>SD</i>)
Age (<i>SD</i>)	48.13 (11.22)
Sex (%)	
Male	34 (87.2%)
Female	5 (12.8%)
Country of birth and primary language (%)	
India – Gujarati	15 (38.5%)
Bangladesh – Bengali	13 (33.3%)
Pakistan – Urdu	11 (28.2%)
Length of stay in the United States* (%)	
Less than 1 year	2 (5.1%)
1–2 years	2 (5.1%)
3–5 years	6 (15.4%)
6–9 years	2 (5.1%)
10–15 years	9 (23.1%)
>15 years	15 (38.5%)
Don't know	2 (5.1%)
Spoken English fluency* (%)	
Fluent	5 (12.8%)
Proficient	11 (28.2%)
Limited	17 (43.6%)
None	4 (10.3%)
Last grade of school completed (%)	
None	6 (15.4%)
Grades K-5	2 (5.1%)
Grades 6–11	7 (17.9%)
Grade 12/HS graduate	6 (15.4%)
College graduate	7 (17.9%)
Post-college/graduate school	3 (7.7%)
Don't know	4 (10.3%)
Missing	4 (10.3%)
Employed (%)	
Yes	25 (64.1%)
No	14 (35.9%)
Ever use of tobacco products (multiple-responses) (%)	
Gutka	26 (66.7%)
Tambaku paan	18 (46.2%)
Cigarettes	14 (35.9%)
Cigars	2 (5.1%)

Characteristic	Total N (%) or Mean (SD)
Bidi	4 (10.3%)
Supari	13 (33.3%)

* Due to missing data, the numbers (percentages) do not add up to 39 (100%).

Table II**Health effects of gutka/tambaku paan use.**

Health effects	Examples of supporting quotations
1. Identification of health risks associated with use	<p>“At first you get acidity and second, once you’ve gotten into the habit, you feel anxiety and third, you can get mouth cancer.” (G-P#3)</p> <p>“I have heard, read it in books and newspapers that it causes cancer.....It can cause lung problems. It might cause blood pressure...” (B-P#11)</p> <p>“I know that a lot of people say that you can get cancer from jorda. A lot of people have heart problems. Many people feel dizzy. There are many bad sides.” (B-P#10)</p> <p>“If you use gutka, in most cases, you can get oral cancer, this is what we hear, those who use it a lot, and they use chuna in it which causes the cancer very quickly”. (U-P#1)</p>
2. Sharing of personal stories about friends/family members/relatives who suffered due to use	<p>“I have a cousin, I’m not sure if he has cancer or not, but since the past 20 years, his mouth does not open. Even to eat roti [Indian bread], he has to shove it into his mouth and he’s living on a liquid diet mostly of rice and dal for the past 20 years as a result of tobacco use and he continues to use it to this day.” (G-P#1)</p> <p>“Yes, I have two three friends but they are not here, they have gone to another state. What had happened to them was that they used to cough. They started coughing a lot and their blood pressure went up a lot.” (U-P#8)</p> <p>“Yes, I had a friend in India who ate so much tobacco that he developed tongue cancer and the doctors had to cut his tongue and despite that, he died six months ago. Another example in my own family is my own brother who’s older than me by two years. He developed cancer due to eating gutka and he died three years ago.” (G-P#13)</p> <p>“I had a friend who ate so much gutka that he developed blisters on his tongue. He has cancer now, but he’s still alive.” (G-P#9)</p> <p>“My uncle who lived in South Carolina died last year. First they cut a portion of his tongue and then they cut a little more and finally, he died.” (G-P#14)</p> <p>“I used to have a friend called Farooq in Pakistan. He was an international wrestler and used a lot of tambaku paan and gutka. He got diagnosed with oral cancer and as it spread through his body, he got blood cancer as well. Ultimately, he passed away so from that, I know that using this can develop cancer in your body.” (U-P#2)</p>
3. Health benefits of quitting (one man’s personal story of quitting)	<p>“I’ve benefitted a lot by quitting. I eat more, my jaws no longer hurt although I thought I’d have trouble but it’s working great. There are a lot of benefits to quitting and I can share my experience with people. I stopped a month ago and instead of eating four chapattis a day, I eat eight. I felt so different, otherwise, I would eat gutka, have tea and water. In continuously eating it for fourteen years eating, this is the first time I successfully stopped it and it’s a big difference.” (G-P#13)</p>

Table III

Disengagement beliefs for justifying gutka/tambaku paan use.

Beliefs	Examples of supporting quotations
1. Skepticism	
General disbelief	<p>"I haven't heard it, I don't understand it. And I don't think having too much causes a problem; I don't get how it would." (B-P#13)</p> <p>"Because for just a little thing, he wouldn't have cancer, could be other reasons ..." (U-P#1)</p>
Non-tobacco users also get cancer	"As we said earlier, there's people who get cancer even without ever using tobacco, so if we still have that risk, then why not eat it anyway?" (G-P#1)
Not all tobacco users get cancer	"In my neighborhood, I have seen some cancer patients. A girl who has never smoked in her lifetime has cancer too. Also, many who smoke [or eat gutka] a lot are not affected." (B-P#2)
2. Perceived invulnerability	
Cancer affects older people	"He might be thinking in his head that he feels satisfied and that it's not affecting him and at twenty, who thinks they're gonna get cancer?" (G-P#8)
No harm personally	<p>"I have heard people who use talking about people who get cancer but I have never seen a case personally. And those who chew it just talk about it but never stop it. And I've never seen a case like that." (U-P#4)</p> <p>"I don't understand good or bad; I feel good having it that's why I have it. Also, there's nothing bad. All my life, nothing bad has happened." (B-P#13)</p>
3. Compensatory beliefs	<p>"If people have a lot of jorda, it will definitely harm them. It's not good to have anything in excess. Having an appropriate portion doesn't affect anyone. Having too much can make you dizzy. And if you don't have too much, it doesn't affect you." (U-P#1)</p> <p>"I don't have any [harmful effects]. If I don't use, there is none, if I use, then also there is none. The reason for that is, if the person exercises, does some strong work, then the person can digest anything. I work hard, collect land revenue ..." (U-P#9)</p>
4. Faith-based rationalizations	<p>"God always gives people one thing or another. A lot can happen. If I have a heart attack, would it be from paan? That's not it. I have it because God has given it to me. I believe in this. I believe in God." (B-P#13)</p> <p>"And cancer is God-given. Who gets it for what reason, God knows best. No one knows for sure that is caused by paan or jorda." (B-P#10)</p> <p>"What happens in our belief system is that death is God's will. They don't understand the reason that is causing them to die and if they get cancer, they don't understand why did they get it. They just don't accept it." (U-P#10)</p>
5. Acknowledgment of addiction	<p>"Usually, once a man develops a habit, he ignores everything negative about that habit and continues on. Like me, I have this tobacco addiction, even though I know the negative effects of its use, I can't make myself mentally focus on the positive to give it up. The addiction is dominating my reasoning. It's just like alcohol abuse, in the same way, we know that this habit is not giving us true comfort or relief, but just making it seem that way." (G-P#3)</p> <p>"My jaw has been removed and my face is unbearable to look at and even then, I am not able to give it up. That's the type of addiction that this is and I don't feel alive without it." (G-P#5)</p>