

ORIGINAL INVESTIGATION

Reigniting Tobacco Ritual: Waterpipe Tobacco Smoking Establishment Culture in the United States

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ABSTRACT

Introduction: Waterpipe tobacco smoking (WTS) is an increasingly prevalent form of tobacco use in the United States. Its appeal may stem from its social, ritualistic, and aesthetic nature. Our aim in this study was to understand WTS as a social ritual with the goal of informing prevention efforts.

Methods: We conducted a covert observational study consisting of 38 observation sessions in 11 WTS establishments in 3 U.S. cities. Data collection was based on an established conceptual framework describing ritualistic elements of tobacco use. Iterative codebook development and qualitative thematic synthesis were used to analyze data.

Results: Atmospheres ranged from quiet “coffee-shop” to boisterous “bar party” environments. While some children and older adults were present, the majority of clientele were young adults. Men and women were evenly represented. However, there were 19 occurrences of a male smoking by himself, but no women smoked alone. The vast majority (94%) of the clientele were actively smoking waterpipes. All 83 observed groups manifested at least one of the ritual elements of our conceptual framework, while 41 of the 83 observed groups (49%) demonstrated all 4 ritual elements.

Conclusions: Despite its heterogeneity, WTS is often characterized by one or more established elements of a tobacco-related social ritual. It may be valuable for clinical and public health interventions to acknowledge and address the ritualistic elements and social function of WTS.

INTRODUCTION

Individuals in India and the Middle East have smoked tobacco using a waterpipe—also known as a narghile or hookah—since the 1600s (Chattopadhyay, 2000). Historically, waterpipe tobacco smoking (WTS) was mainly practiced by older adult males, as waterpipe tobacco was unflavored, and smoking it tended to be harsh and irritating to the throat (Rastam, Ward, Eissenberg, & Maziak, 2004). In the 1990s, Middle Eastern manufacturers began mixing tobacco with glycerin, honey, molasses, and aromatic flavors to create a product called ma’assel (Arabic for “with honey”), which produces milder smoke and contains flavors such as mint, apple, and chocolate. This has contributed to the diffusion of WTS internationally, particularly among young people (Maziak et al., 2004; Rastam et al., 2004).

In the United States, between one-quarter and one-half of all university students have tried WTS (Primack et al., 2013,

2008), and the prevalence of WTS among high school and middle school students is increasing (Barnett, Curbow, Weitz, Johnson, & Smith-Simone, 2009; Grekin & Ayna, 2012; Primack, Walsh, Bryce, & Eissenberg, 2009; Smith et al., 2011). While cigarette use is declining in these age groups (National Center for Health Statistics, 2013), the increase in WTS poses health risks. In a single 45–60 min WTS session, a smoker is exposed to levels of carbon monoxide, tar, nicotine, carcinogenic polycyclic aromatic hydrocarbons, and heavy metals that exceed those found in a single cigarette (Katurji, Daher, Sheheitli, Saleh, & Shihadeh, 2010; Schubert et al., 2011; Sepetdjian, Shihadeh, & Saliba, 2008; Shihadeh & Saleh, 2005). Furthermore, individuals exposed to WTS have levels of nicotine blood plasma and exhaled carbon monoxide similar to those exposed to cigarette smoke (Barnett, Curbow, Soule, Tomar, & Thombs, 2011; Maziak et al., 2011; Neergaard, Singh, Job, & Montgomery, 2007).

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Reigniting tobacco ritual

A growing body of research describes some of the factors associated with the increasing popularity of WTS. For example, permissive public policies may be contributing to WTS (Primack, Hopkins et al., 2012). Additionally, smokers perceive WTS as less harmful, less addictive, and more socially acceptable than cigarettes (Aljarrah, Ababneh, & Al-Delaimy, 2009; Nuzzo et al., 2013; Primack et al., 2008; Smith et al., 2011). Focus groups of hookah smokers conducted internationally also suggest that factors such as aesthetic, sensory, and social appeal influence WTS initiation and use (Nakkash, Khalil, & Afifi, 2011; Roskin & Aveyard, 2009). While this research has been valuable in describing attitudes and beliefs related to WTS, systematic work directly documenting observed social behaviors associated with WTS may deepen our understanding of this behavior. Prior research demonstrates the importance of understanding the social and cultural function of tobacco and how this can be incorporated into public health interventions (Goldade, Burgess, Olayinka, Whembolua, & Okuyemi, 2012; Mukherjea, Morgan, Snowden, Ling, & Ivey, 2012). This may be particularly true for WTS, because recent research suggests that, compared with traditional forms of tobacco use, the social aspect of WTS plays a prominent role in its appeal (Carroll, Shensa, & Primack, 2013; Primack, Rice et al., 2012).

Tobacco use has been examined as a social ritual in which participants consume tobacco products as part of a process that creates or reinforces group solidarity (Collins, 2004). This may be a helpful framework for understanding WTS because its physical and functional properties are of a conspicuously ritualized nature. For example, preparing the waterpipe is a time-consuming, multistep process that elicits a growing body of online community discourse (Carroll et al., 2013). However, the dynamic interplay of environment and social interactions among groups using tobacco in this way has not been sufficiently studied. To our knowledge, only one other study examined social interactions within U.S. WTS establishments (Blank, Brown, Goodman, & Eissenberg, 2014). Although this study examined some sociodemographic characteristics and behavior of the establishment clientele, the main purpose was to examine smoking topography. Therefore, we conducted covert observations of WTS establishments to contribute to the understanding of how WTS's popularity may be linked to its function as a social ritual.

METHODS

Covert Observation and Ethical Approval

We designed this study as a systematic covert observation, in which the observed parties are unaware that they are being observed and the observer attempts not to be identified as an outsider (Lauder, 2003). This is fundamentally different from participant observation, in which the researcher assimilates into the culture and directly engages with individuals in the environment. In covert observation, the observer might participate in some aspects of the culture to remain inconspicuous, but does not engage the members in dialog about the research topic. Researchers often choose this method when they believe that the individuals being observed might alter their behavior or provide misleading information if they were aware of being observed (Brotsky & Giles, 2007; Ford, Birmingham, King, Lim, & Ansermino, 2010).

Covert observation can be useful because (a) it can provide a high degree of authenticity, (b) it is less disruptive to the group and no formal gatekeeper or key informant is needed, and (c) it can minimize social desirability bias and the Hawthorne effect, in which study subjects alter their behavior to gain approval of the research team (Brotsky & Giles, 2007; Ford et al., 2010; Lauder, 2003). However, the primary drawbacks of this method are logistical and ethical; the main ethical concern centers on whether a certain level of deception on the part of the researcher is justified (Lauder, 2003).

For the current study, we determined in consultation with Institutional Review Board (IRB) personnel that concerns regarding deception were minimal because all observations were to be conducted in public places and because our protocol avoided the use of personally identifying information. Furthermore, this method presented many benefits, as WTS establishment owners and clients would likely have altered their behavior if they had known that they were being observed. Thus, this method was selected to provide observers an opportunity to collect naturalistic data without interfering with participants and their environments. Our study was approved by the IRB of the senior author's university, with the understanding that we would not interview participants or record identifying markers (names or distinguishing physical characteristics) of waterpipe establishment staff or clientele.

Site Selection

In order to increase the number of potential observation sites, as well as increase the generalizability of our results, we selected WTS establishments in three U.S. cities with universities which collaborate on WTS research. These cities and universities were ideal because they have diverse characteristics. One is a large east coast metropolitan city, another is medium-sized mid-Atlantic city, and another is a small southeastern city in which students represent a large percentage of the population. One university is private and has about 10,000 students, whereas the other two are public universities, one with about 25,000 students and the other with more than 50,000 students. Despite the differences in city and student populations, all three cities contained several WTS establishments.

We found 42 potential sites for observation via systematic Internet searches. To be eligible for observation, establishments had to refer to themselves as a "hookah bar," "hookah café," or "hookah lounge," or as a restaurant with a designated WTS area. Because we were primarily interested in examining the culture of venues dedicated to this practice, establishments were ineligible if they offered only a seasonal outdoor WTS area or if they were tobacco retail shops without a designated sit-down WTS area. The establishments had to be within a 5-mile radius of one of the universities to ensure that the WTS establishments sampled were accessible to areas with a high concentration of young adults. The final sample included 11 WTS establishments, with roughly equal numbers in each of the study cities (Figure 1).

Observer Selection and Training

In covert observation, the observer is chosen on the basis of his or her ability to fit in to the study culture and to observe and record as many interactions as possible (Lauder, 2003). Observers were young faculty, staff members, and students

Hookah Bar Selection Flowchart

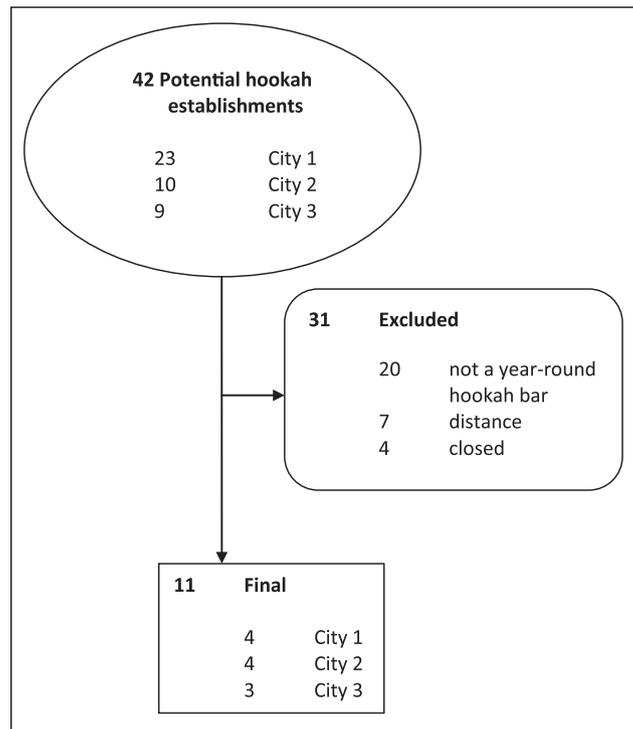


Figure 1. In the three target cities, 42 potential waterpipe tobacco smoking establishments were identified with a systematic Internet search. After applying exclusion criteria, 11 establishments remained for analysis, with approximately equal representation from each city.

from participating universities. Thus, observers generally matched the demographic profile of WTS establishment customers. The age differences of observers enabled us to note variations in policies related to activities such as age verification via identification card.

Observers attended a 2-hr interactive training session in which the principal investigator and research coordinator used visual materials and examples from previous research to instruct them about covert observation methods, the study framework, the observation protocol and observation guide, and ways in which to document their observations and their experiences as observers. In order to maintain reliability of the data collected, this training stressed as much uniformity as possible in the collection of data and completion of the observation guide.

Timing of Observations

We scheduled individuals to conduct observations during an 8-week period that did not conflict with spring break or final examinations for any of the universities. We planned four observations at each of the 11 WTS establishments. To improve triangulation of data, which is a method of increasing validity in qualitative studies (Patton, 2002), we designed the observation schedule so that at least two different individuals observed each WTS establishment. This also served to broaden data collection and maintain concealment of the observers.

Because the atmosphere at WTS establishments can change at different times, we asked each observer to conduct assessments during two periods of the day (early evening and late

night). We also instructed observers to observe on both a weekday—when the establishment might be relaxed and quiet—and also a Friday or Saturday night—when it might be busier and more celebratory. Observers made their planned observations independent of each other, although they were encouraged to bring a friend, both as a safety precaution and to assimilate more inconspicuously into the environment.

We deemed 2 hr to be an appropriate period of time for each data collection session in order to assess multiple variables of interest without the observer becoming conspicuous. Observers collected certain data, such as the number of individuals present, at 30 and 90 min into each observation. This temporal redundancy added a layer of triangulation to the data collection.

Observation Procedures and Data Collection

As instructed, observers posed as patrons, interacting minimally with staff and clientele to assess the environment and individuals' behavior. On entering the establishment, the observers found a central location from which to observe and ordered a nonalcoholic beverage or small food item from the menu. Observers were instructed to closely observe up to the three groups of individuals that were physically closest to them, regardless of composition, in order to be as systematic as possible in their observation process while remaining inconspicuous. Observations of group interactions, which were conducted long enough for all variables to be assessed or for as long as possible, were conducted at 30 and 90 min into the observation session. The observers did not record any

Reigniting tobacco ritual

| Logistics and Atmosphere | Products and Staff | Clientele | Behavior | Comparisons and Additional Comments | |
|--------------------------|---|--------------------|---|-------------------------------------|---|
| Group 1 | | Group 2 | | Group 3 | |
| Group Number | 1 | Group Number | 2 | Group Number | 3 |
| Comments | 2 Middle Eastern men, I believe one is the staff member and the other is a | Comments | 1 young White college aged male. Sitting by himself with his own hookah and chatting | Comments | Very young group. Look like they right around 18. 2 males and 2 females, White. Sitting |
| Conversation | Between the music and the distance, there was no way to hear the conversation | Conversation | Seems to be talking with pretty much any staff member or patron that is at the bar. He came by himself, but he is | Conversation | It might be someone's first time as I hear "don't be scared, try it" from one of the guys to the girls. Also hear |
| Languages | | Languages | English | Languages | English |
| Group Cohesion | Both seem reasonably involved in the conversation, but obviously the staff seems | Group Cohesion | Not much of a group, but seems to try to associate himself with all of the groups, | Group Cohesion | Seems like it is the two guys and the two girls. They are obviously friends but the guys |
| Mood | Seems light | Mood | Casual conversation. Light mood with just talking with | Mood | Light, lots of story telling, trying to act as if they are pros |
| Focus of Attention | Conversation and just hanging out enjoying the evening. This patron came earlier in the night (when there was almost nobody here) and maybe | Focus of Attention | Frequent smoking, but whenever not smoking seems to be spending a lot of time trying to engage in conversation with staff and | Focus of Attention | When people are telling stories, there is quite an emphasis put on paying attention to the story teller, but when there is smoking, |
| Etiquette | Doesn't seem to be anything | Etiquette | Most of the etiquette seems | Etiquette | Quick passing of the hose. |

Figure 2. Coders used a structured observation guide to collect data. The guide was based on our conceptual framework and contained subsections related to factors such as logistics and atmosphere, products and staff, clientele, and behavior. The vast majority of fields were open-ended in order to capture rich data for qualitative analysis.

identifying details about individuals they encountered, and they did not engage in any unnecessary discussion with staff or clientele. Although the observers did not smoke waterpipes, they generally did not have difficulty assimilating into the environment, because most of the WTS establishments offered a variety of products to purchase. In a few cases, however, not smoking waterpipe seemed to be regarded as strange by the staff and affected observers' interactions with them. In two instances, WTS establishment staff told the observers that smoking waterpipe was required and asked the observers to leave if they did not engage in WTS.

When possible, because of the café-like nature of some WTS establishments, observers used laptop computers to enter their field notes directly into the observation guide database (Figure 2). When the environment made it awkward to use a laptop (e.g., if the WTS establishment environment was similar to that of a dance club), the observers took notes on their mobile phones or on paper and then entered the notes into the computerized data depository soon after leaving. Given how regularly young adults consult their phones, using mobile phones to record field notes proved effective when laptop use was not appropriate.

Conceptual Framework: Interaction Ritual Model

We used Collins' Interaction Ritual Model to analyze the ritual elements of WTS (Collins, 2004). In this framework, a "socially successful" ritual is one that meets the overall goal of creating and reinforcing emotional solidarity among a group of individuals, no matter the size or context (Collins, 2004). Collins identified four "ingredients" that are necessary to produce ritual outcomes: (a) group assembly, (b) barriers to outsiders, (c) mutual focus of attention, and (d) shared mood (Collins, 2004).

"Group assembly" refers to the need for participants to connect with each other in a shared physical space or maintain bodily copresence. "Barriers to outsiders" establish who is partaking in the ritual and who is not; they may be physical, or may be defined through the actions of the ritual itself. "Mutual focus of attention" refers to shared concentration on an object and/or person(s) that represents their purpose for taking part in the ritual, which reinforces, and is simultaneously reinforced by, a "shared mood" within group members about their participation in the ritual.

When these ingredients combine, the outcomes of the ritual process include (a) group solidarity, (b) emotional energy in individuals, (c) symbols of social relationship (e.g., "sacred objects"), and (d) standards of morality (Collins, 2004). Thus, performing a ritual task reinforces social connection and relationships when individuals experience an emotional response to the ritual. The interesting interplay between symbols and standards of morality lead to objects or individuals at the center of the ritual obtaining a symbolic status as "sacred objects," which become guarded by rules and codes of conduct within the ritual space. Those who fail to respect and follow these rules are seen as threatening the integrity of the group, and both sacred objects and adherence to the group are defended against transgressors or outsiders (Collins, 2004).

Collins specifically applied the Interaction Ritual Model to tobacco use, focusing on smoking (pipes, cigars, cigarettes), snuff, and chewing tobacco (Collins, 2004). In this context, tobacco use can apply to various rituals, including relaxation, carousing, and elegance, with focus generally centered upon the smoking apparatus, such as the cigarette or pipe. To our knowledge, this model has not yet been applied to the ritual surrounding WTS and the waterpipe itself.

Measurements

We divided our observation guide into three major categories: (a) clientele and staff, (b) establishment environment, and (c) group interactions. Elements specific to clientele and staff included the number of clientele and staff, number of individuals smoking waterpipes, and observed demographics of clientele and staff. Elements related to the environment included physical descriptions of the establishments, cultural themes, and sensory experiences of observers (e.g., conspicuous sights, sounds, and smells).

We based our collection of group interaction data on the Interaction Ritual Model, as described above (please see “Conceptual Framework”). For example, the concept of “shared mood” was measured with an open field in which the observer was instructed to provide a “description of general shared mood of the group and evidence of altered emotional energy of individuals as a result of participation in the group.” As noted above, fluid elements which change during the course of the observation period, such as the number of individuals in the establishment, were noted at both 30 and 90 min.

Analysis

We performed in vivo coding of the above-mentioned fields, which was followed by a three-step iterative process that included open coding, axial coding, and codebook development. Two independent coders conducted initial open coding; the process of identifying, naming, describing, and categorizing phenomenon found in the field. The coders then compared and consolidated codes. Codes created during open coding were then related to each other with axial coding through inductive and deductive processes, and coders continued to search for new themes and explore connections until thematic saturation had occurred and no new themes appeared to be emerging. The codebook was then drafted, refined, and formalized and coded text was compared. After the final codebook was applied to all observational data, we reviewed the data to identify patterns, categories, and themes. Each of the constructs representing the four essential ritual ingredients and four ritual outcomes was strictly defined a priori for consistent coding. For “shared mood,” for example, we categorized group mood as having high, medium, or low energy based on key words, terms, and phrases. For example, we classified the energy level as “high” if there was frequent conversation, movement, and/or excitement within the group, which was determined through words such as “happy,” “enthusiastic,” or “excited.” Energy was defined as “low” in groups that exhibited relaxed, calm body language, and where movement and discussion were subdued, which was determined through words such as “relaxed,” “chilling,” or “pleasant.” Energy defined as “medium” represented a middle-ground between these two, which was determined through words such as “focused,” “concentrated,” or “thoughtful.” We synthesized these findings and selected exemplary quotations to guide this thematic synthesis, in which codes are organized into descriptive and then analytic themes.

RESULTS

Staff and Clientele

A total of 38 WTS establishment observations were conducted. The staff and clientele of the WTS establishments were

ethnically diverse. When race and ethnicity were apparent, most staff and clientele were identified as Caucasian, Middle Eastern, or South Asian. Individuals were also socioculturally diverse. For example, females included women wearing Muslim headscarves, “clean cut” sorority individuals, as well as young women with torn jeans, tattoos, and multiple piercings. Males, similarly, represented a spectrum of social milieus.

The majority of the clientele during the 38 observation sessions were young adults. However, there were also intergenerational family groups, children, and older adults. Men and women were evenly represented and were present in same-sex groups, mixed groups, or couples. There were 19 occurrences of a male smoking by himself, but no women smoked alone. On six occasions, there were children present at the WTS establishments. In three of these instances, the adults or the children themselves seemed to know the staff and/or owners.

The vast majority (94%) of the clientele in the WTS establishments were actively smoking waterpipes, and in over half of the observation sessions (21 out of 38, 55%), every individual in the establishment was smoking a waterpipe. Establishments that were also full-service restaurants had fewer smokers. During the observations conducted at meal times in these establishments, only 33% (55 out of 169) of clientele were actively smoking waterpipes.

Establishment Environment

Six of the 11 establishments were decorated with Middle Eastern and/or Indian décor. Examples of Middle Eastern and Indian decorations included Arabesque patterned tapestries, papyrus wall hangings, decorative swords, and musical instruments on the walls. Other WTS establishments, in contrast, had conventional tables and chairs, fireplaces, bar counters, televisions showing sporting events, dance floors, and other activities available in coffee shops, lounges, and clubs.

Group Interactions

A total of 83 groups, of varying size and demographic makeup, were observed during the 38 observation sessions. Forty-one of the groups smoking hookah exhibited all four of the ritual ingredients: group assembly, barriers to outsiders, mutual focus of attention, and shared mood (Table 1). All groups exhibited at least one of the four ritual ingredients. For those groups that did not manifest all the ritual ingredients, the most commonly missing ingredient was focus of attention.

Group Assembly and Barriers to Outsiders

The majority of groups interacted closely, maintaining barriers to outsiders by facing each other and maintaining the focus on their companions. They often sat circled around the hookah (Table 1, A.1.–A.3.). When clientele appeared to be on a date—or when there were other barriers to outsiders such as the group speaking a different language—groups appeared particularly less open to others (Table 1, A.4.). In contrast, some groups appeared approachable to outsiders, even inviting observers to join their group (Table 1, A.5.–A.6.). Despite the inviting nature of many of the WTS establishments, there were two that did not allow people who were not using waterpipe to stay in the establishment, creating another potential boundary to inclusion in the ritual.

Table 1. Examples of Interaction Ritual Content of Waterpipe Tobacco Smoking Establishment Observations

| Coding category | Observation |
|--|---|
| A. Group assembly/ Barriers to outsiders | A.1. The girls don't seem to smoke much while they are listening to each other, in fact, they only seem to smoke when there is a pause in the conversation. |
| | A.2. The woman's body language is a bit tense. She has her coat on her lap in her hands. The young man is leaning forward toward the young woman but she is sitting up straight in her chair. As they talk more, she begins to lean in more and gesture occasionally with her hands after a few minutes of smoking. The young man plays with the coals. |
| | A.3. They are both slumped down significantly onto the couch. They both focus on the cell phone game and the one playing holds it up rather than resting it in his lap to facilitate his friend's ability to watch it. They both are leaning slightly toward each other. |
| | A.4. They appear to be on a date and not open to others joining them. |
| | A.5. He is not much of a group, but seems to try to associate himself with all of the groups, so there are a bunch of small groups that are intermingling to make a larger group. |
| | A.6. They are very approachable. One of the girls says she likes my scarf and seems like she would be open to striking up a conversation. The young Arab guy joins right in their group, although they seem to know him it doesn't seem like he was necessarily invited, but they accept him into their group. Later he moves to join the owner and staff and show them Arabic video clips. |
| B. Focus of attention | B.1. The focus is on their conversation, and the woman seems to try to take the focus away from the hookah as much as possible. |
| | B.2. They are focusing on the Celtics' game on the TV above the bar. |
| | B.3. Girls are frequently using their phones. The girls, when they first arrive, take pictures of each other and the whole group on their phones. |
| | B.4. When people are telling stories, there is quite an emphasis on paying attention to the story teller, but when there is smoking, people seem to be watching the smoker pretty intently. |
| | B.5. One guy seems to be in charge. He orders the next flavor of tobacco for the group. He moves the coal around if the staff hasn't in a while. He takes off the hose from the pipe and releases the pressure valve. He seems like he is experienced and knows quite a bit about hookah. He has reorganized some of the pillows that were on the bench so he has two arm rests. He gets up multiple times throughout the session—actually comes up to me and asks me if I am cold and after telling him I'm a little warm he adjusts the thermostat to turn the air conditioning on a little more. |
| | B.6. The one female who seems to know the boss/manager seems to be the leader since she talks and flirts with the boss while the other female does not talk with him much. |
| | B.7. The female server seemed to be friends with the group, she came by quite often and even sat with them at times discussing the game. |
| | B.8. There is a lot of interaction with the staff. They appear to be regulars who haven't come for a while, and now they are catching up. At one point the younger male staff member comes over and starts tickling one of the girls; he takes her hookah hose and smokes from it. |
| | B.9. They begin to try and do tricks. Though it is hard to see, the woman begins to blow smoke rings, and the man asks whether she knows that tapping her mouth forms rings as well. He then proceeds to blow traditional smoke rings as well. |
| | B.10. One guy actually took both of the hoses at the same time and put them both in his mouth to inhale. |
| B.11. He blew hookah smoke out of his mouth into a straw that was in a cup of ice and took pictures. | |
| C. Shared mood | C.1. Emphasis was on getting crazy and drinking/smoking a lot. |
| | C.2. Lively, lots of yelling and joking, occasionally breaking out into song. |
| | C.3. Happy, excited, celebratory. |
| | C.4. Nervous, quiet at first, then their mood seems to relax a bit. |
| | C.5. Mellow, relaxed. |
| | C.6. He seemed like he was in a hookah-induced stupor. |
| | C.7. Seems maybe slightly unhappy as he has a constant frown on his face and is very focused on his laptop. |
| | C.8. Heated debate, only one person speaking at a time, mostly serious, but sometimes saying funny or witty things. |
| D. Standards of morality (etiquette) | D.1. They start at one end and pass it right down the line. The hits are very quick. As soon as they finish inhaling they pass the hose, often before they are even finished exhaling all of the smoke from one inhale. |
| | D.2. Sometimes the group would argue whose turn it was. On the whole the non-couple guy (leader) smoked the most, but there were times where the other guy held the hose for longer times. Often times the two guys would pass the hose back and forth and skip the girl, which would then cause her to say "it's my turn." |
| | D.3. The younger woman in her 30s is instructing the middle-aged man and older woman on how to smoke. They are very excited. The man coughs a bit, but she tells him it's filtered by the water, that it's very sweet and smooth. |

Focus of Attention

The focus of attention for most groups revolved around either their conversation or the waterpipe itself (Table 1, B.1.). However, in some cases clientele were focused on a television, other electronics such as cell phones, or activities such as games or dancing (Table 1, B.2.–B.3.). Groups tended to share the same focus of attention, although it sometimes changed throughout the WTS session. Some clientele appeared reluctant or self-conscious about their participation in WTS, which affected their focus (Table 1, B.1.). In establishments with a strong Middle Eastern influence, the focus of attention tended to be on the waterpipe itself and the conversation of the group.

Prior work related to rituals around cigarette smoking suggests that a group leader can initiate smoking rituals and serve as a focus of attention (Christakis & Fowler, 2008). We found that there was often no clear group leader (Table 1, B.4.). When there was, it seemed that WTS expertise was an important determining factor; the most experienced participant seemed to control the hookah smoking process with others deferring to his/her knowledge and expert status (Table 1, B.5.). In other groups, leadership was based less on WTS knowledge and more on the level of comfort and sociability of the participants (Table 1, B.6.).

Most customers interacted with staff in a polite and friendly manner, but kept their conversation limited to the basics of ordering food, drink, and waterpipes. Other clients had more prolonged and close contact with the staff, as if they were “regulars” (Table 1, B.6.–B.8.). Staff members dressed casually and behaved informally with clientele, and “regular” clientele sometimes helped run the establishments (Table 1, B.6.–B.8.). Staff sometimes instructed the clientele on how to smoke hookah. In 18 different group observations, clientele were observed doing tricks, such as blowing smoke rings, exhaling smoke through their nose, and blowing smoke into a cup or glass (Table 1, B.9.–B.11.).

Shared Mood

The majority of groups exhibited high energy (Table 1, C.1.–C.3.). At the other end of the spectrum, some low-energy groups appeared bored, sleepy, sedated, or even stuporous (Table 1, C.4.–C.6.). Medium-energy groups were focused, concentrated on watching television, working on their laptops, or talking with other people (Table 1, C.7.–C.8.). Medium-energy groups tended to be smaller or consisted of solo individuals.

Standards of Morality (Etiquette)

Discussion of rules or formalized etiquette was rare; we observed no standardized pattern of acceptable WTS etiquette. In some groups, participants avoided blowing smoke in others' faces, while others blew smoke directly into the face of another in a sexualized, taunting way. Interactions with the waterpipe hose varied as well. In general, it was passed around in a group from person to person sequentially after 5–15 s (Table 1, D.1.). Other times, however, group members took multiple inhalations and held it in their hands without smoking for several minutes before passing it on. Occasionally, there was a leader who smoked more or encroached on others' rights to smoke by holding the hose for a long time or going out of order (Table 1, D.2.). Some “instructional” sessions involved the teaching of proper technique which was characterized by a sense of etiquette (Table 1, D.3.).

DISCUSSION

We found that a predominant framework of social interaction ritual is applicable to WTS. As has been found with other types of tobacco use (Collins, 2004), WTS's ritualistic elements may play a role in its initiation and use, especially by young people. Our results support past findings on perceptions and attitudes of waterpipe tobacco smokers (Aljarrah et al., 2009; Nakkash et al., 2011; Smith et al., 2011). WTS's popularity may lie in its ability to be exotic, yet still adaptable to local culture. For young adults such as college-aged individuals, this exotic image, combined with WTS's ability to meet their needs for social interaction, makes WTS attractive.

WTS was the main activity in most of the observed establishments (94% of clientele were smoking), which was consistent with other published studies of WTS establishments (Blank et al., 2014), and we were able to observe all of the ritual ingredients and ritual outcomes. While some of the ritual ingredients were observed in each session, some group observations did not contain all the elements necessary to be considered a ritual. For example, sometimes hookah played a less important role than another activity, such as when the focus of attention was on watching a sporting event. In this way, WTS functions somewhat like alcohol use, which can be an activity in itself but also often accompanies other activities. The “hybrid” nature of WTS may be valuable for those developing interventions to consider. Because the substance ingested is tobacco, it may seem appropriate to adapt current successful tobacco-related interventions to WTS. However, because there are elements of the ritualistic behavior similar to alcohol, it may also be valuable to adapt appropriate alcohol-related programming, the most effective most likely being related to policy interventions (taxation, reduced density of establishments, and advertising restrictions) and family or school-based educational interventions (Martineau, Tyner, Lorenc, Petticrew, & Lock, 2013). Due to the paucity of studies investigating best practices for WTS prevention and intervention, more research is needed to determine which path is most effective.

The aspect of bodily copresence seemed to be a central element of hookah smoking. While Internet videos often show individuals smoking hookah alone (Carroll et al., 2013), the goal of these lessons seems to be teaching viewers to use hookah correctly in a group situation. Most WTS establishment clientele attended in pairs or groups. One explanation for this could be that the large size of the waterpipe and/or amount of tobacco in the bowl, coupled with the fact that it contains a lit charcoal, is most easily practiced as a stationary group activity. Thus, the inherent nature of this product likely affects some aspects of this ritual. However, previous research has shown that smoking behavior spreads through social ties (Christakis & Fowler, 2008) and that positive social experiences with smoking can be reinforced while smoking by oneself at a later point in time (Collins, 2004). As with many rituals that involve substance use, smoking combines the physical effects of a substance with the user's experience in a particular social setting. Thus, the effects of the drug on the user can vary depending on the environment and nature of the ritual involved. Users may experience positive emotional and social outcomes of the smoking rituals and wish to experience them again, even when physiological addiction is not present (Collins, 2004). Thus, the positive social rituals associated with WTS may be a

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driving force in this process, but further research on patterns of use and addiction is needed.

While some of the groups of WTS clientele exhibited barriers to outsiders, there was generally a sense of inclusivity in most of the establishments. Many observation sessions also included “regulars” who were known to the staff and functioned as experts for their peers. Characteristics that set the initiates apart from the regulars included not only familiarity with the staff, but also a sense of knowledge and reverence about WTS culture. This fostering of a “smoking culture” has been shown to increase the social value of this activity and can lead to increased use (Poland et al., 2006). We also found that formalized etiquette was rare, which was contrary to other social ritual behaviors such as marijuana smoking (Zimmerman & Wieder, 1977). Considering the emergence of instructional home-made videos on social media sites such as YouTube (Carroll et al., 2013), we had expected more formal demonstrations of etiquette. However, there were some instances in which etiquette was addressed more informally, such as avoidance of blowing smoke in the faces of others and only holding the hose for a short period of time.

The waterpipe itself often takes on the status of sacred object, because it is carefully prepared, often serves as the centerpiece of a social gathering, and there are rules about how to prepare and smoke it, which can be considered standards of morality. This was evidenced by the conversations and demonstrations of clientele and staff (Table 1, B.6.–B.8.). Although many participants in WTS rituals may not be aware of the history of the hookah, the décor of the WTS establishments reflect some notion of its past, giving it legitimacy as a ritual symbol that can be coopted and integrated into new ritualized situations.

An understanding of the social function of WTS can be beneficial for health care providers addressing tobacco use with patients. About half of young adult cigarette smokers do not consider themselves to be smokers, mainly because they smoke infrequently or identify themselves as “social smokers” (Berg et al., 2010; Levinson et al., 2007). This could be similar for WTS users. Therefore, when using smoking cessation tools such as the US Public Health Service’s 5 A’s (Ask, Assess, Advise, Assist, Arrange) (Fiore et al., 2008), clinicians should include all forms of tobacco, including waterpipe, in their assessment. Similarly, clinicians may find incorporating hookah culture into the 5 Rs (Relevance, Risks, Rewards, Roadblocks, Repetition) (Fiore et al., 2008) to be useful. For example, the social aspects of WTS can be addressed as a Roadblock, leading the clinician to assist the patient in identifying healthier social activities that can provide a similar social gratification.

As expected, the use of covert observation afforded valuable insights which may not have been possible through other data collection methods. For example, in two observation sessions, the staff asked observers to leave if they did not plan to smoke waterpipes. Although this shortened the planned observations, it provided interesting information about variations among establishments. In these WTS establishments, smoking was a prerequisite for engaging in the establishment culture, and not smoking was a violation of the unwritten rules. As instructed during their training, observers were polite and friendly and made purchases that were equal in price to WTS (e.g., a nonalcoholic drink or food item). Interestingly, the establishments that asked the observers to leave had few clients at the time of the observation sessions. This highlighted a contrast between WTS establishments and regular bars and lounges, in which clients can

purchase nonalcoholic drinks and food without pressure to consume alcoholic beverages. It is noteworthy that these establishments require the use of a substance known to be highly toxic.

While the covert observational methodology offered benefits, it also presented limitations. First, a major limitation with any study using observational research is that results are subjective to the observer, leading to potential observer bias. We attempted to mitigate this risk by stressing during training that observers should strive to collect unbiased data free from their own perceptions about WTS or WTS establishments. Another limitation of observational research is the observer effect, during which the individuals being observed alter their behavior because they are being watched. To address this, we used covert observation. Other limitations specific to this covert observational project were that some ritual elements such as standards of morality and emotional energy in individuals can be difficult to assess without direct interaction. Focus groups exploring these constructs may provide valuable complementary information. Another limitation of the methodology was that the crowded and noisy environments of some of the late-night establishments made it difficult for observers to hear or see what was happening. Similarly, conversations in languages other than English made it difficult for the observers to obtain meaningful data. While this limitation could have been mitigated by having two observers conduct observations simultaneously and compare notes in the field, this would have resulted in a substantial increase in observation hours for each observer, which would have created a burden on our observers. Another limitation of our study was that the majority of those observed were college-aged. Although we did aim to focus on this population, this is important to note because our findings are not necessarily generalizable to other populations. Likewise, the groups chosen for observation were chosen based on physical proximity and ease of observation, so we cannot ensure that they are representative of the overall environment during any given observation period. Finally, we did not conduct specific analyses to determine differences between observation cities and venue types, nor by demographic characteristic. Therefore, the results of this study cannot be used to make conclusions about differences in WTS activities and behaviors in any particular city, venue, or demographic.

In conclusion, despite these limitations, our findings suggest that WTS may be filling a need for ritual inherent in human nature. With increasing stigmatization of cigarettes, some ritualistic aspects of cigarette smoking are fading (Collins, 2004). Because WTS presents itself differently, it may fill this ritual void. It would be valuable for additional research to explore similarities and differences between WTS and other substances used socially, such as alcohol. Understanding how WTS as a positive social ritual affects its use may help public health researchers and practitioners identify the most effective ways to address this increasingly important health risk behavior.

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DECLARATION OF INTERESTS

None declared.

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