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Sex Differences in Hookah-Related Images Posted on Tumblr: A Content Analysis

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Abstract

Hookah tobacco smoking (HTS) is prevalent, widespread, and associated with large amounts of toxicants. HTS may be viewed differently by males and females. For example, females have been drawn to types of tobacco which were flavored, milder, and marketed as more social and exotic. Individuals often use the growing segment of “anonymous” social networking sites, such as Tumblr, to learn about potentially dangerous or harmful behaviors. We used a systematic process involving stratification by time of day, day of week, and search term to gather a sample of 140 Tumblr posts related to HTS. After a structured codebook development process, two coders independently assessed all posts in their entirety, and all disagreements were easily adjudicated. When data on poster sex and age were available, 77% were posted by females and 35% were posted by individuals less than 18. The most prominent features displayed in all posts were references to or images of hookahs themselves, sexuality, socializing, alcohol, hookah smoke, and “tricks” performed with hookah smoke. Compared with females, males more frequently posted images of hookahs and alcohol-related images or references. This information may help guide future research in this area and development of targeted interventions to curb this behavior.

Keywords

Hookah; waterpipe; narghile; tobacco; women; gender; Tumblr; internet; content analysis; social media

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INTRODUCTION

Hookah (also known as waterpipe) tobacco smoking (HTS) is now recognized as a global public health threat (Akl et al., 2011; Cobb, Ward, Maziak, Shihadeh, & Eissenberg, 2010; Maziak, 2011; Primack et al., 2013). While users often perceive that HTS is a safe alternative to cigarette smoking (Afifi et al., 2013; Nakkash, Khalil, & Affifi, 2011; Nuzzo et al., 2013; Sidani, Shensa, Barnett, Cook, & Primack, 2014), in actuality one HTS session exposes the user to about 100 times the smoke volume of a single cigarette (Eissenberg & Shihadeh, 2009; World Health Organization, 2005) as well as equal or greater amounts of nicotine, carbon monoxide, and tar (Cobb et al., 2010). Herbal or nicotine-free hookah tobacco does exist, but is relatively rare and still exposes the user to carcinogenic chemicals released from the sustained burning of the charcoals. HTS is now known to be both prevalent and widespread (Grekin & Ayna, 2012; Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2014; Primack et al., 2012; Sutfin et al., 2011). For example, among a national random population of over 100,000 college students, the proportion of students reporting having ever used HTS was nearly as high as those reporting ever using cigarettes (30.5% vs. 34.1%), and HTS use was consistent across demographic, individual, and environmental factors (Primack et al., 2013). Similarly, a nationally representative study of US high school seniors demonstrated that, in 2013, 21.4% had ever smoked tobacco from a hookah (Johnston et al., 2014). This figure was up significantly from 18.3% in 2012 (Johnston et al., 2014). Because 40–50% of HTS users do not also smoke other forms of tobacco, HTS proliferation is affecting large numbers of individuals who may otherwise have never have been exposed to nicotine (Primack, Sidani, et al., 2008; Primack, Fertman, Rice, Adachi-Mejia, & Fine, 2010).

Given the growing popularity of HTS, it is pertinent to better understand perceptions regarding HTS. Like other forms of tobacco, HTS may be differently perceived by males and females. Historically, females have been drawn to types of tobacco which are flavored, milder, and marketed as more social and exotic—all of which are characteristics of HTS (Carroll, Shensa, & Primack, 2013; Nakkash et al., 2011; Primack et al., 2012; Roskin & Aveyard, 2009). Additionally, both mood and weight concerns have been specifically related to women's cigarette smoking behavior (Jenks & Higgs, 2007; Levine, Marcus, & Perkins, 2003; Meyers et al., 1997; Weinberger & McKee, 2012; White, McKee, & O'Malley, 2007), while masculinity has been related to men's tobacco use (Roberts et al., 2014). Better understanding of differences between male and female HTS users may assist development of tailored interventions designed to reduce HTS use (Khalil et al., 2013; Salameh, Khayat, & Waked, 2012).

Social media presents a valuable opportunity to assess potentially dangerous behaviors such as HTS. In the 21st century, the power of information shared via social networking is becoming increasingly apparent, with almost three quarters of online U.S. adults using social networking sites (Brenner & Smith, 2013). Not as ubiquitous as Facebook, but representing a growing population of younger users, Tumblr is used by about 14% of 18–29 year olds and 61% of teenagers consider Tumblr their favorite social network (DeSilver, 2013; C. Smith, 2014). Tumblr is a social networking site which is focused on “microblogging” (Duffy, 2013) and hosts nearly 200 million Web logs (“blogs”). Its 2013 acquisition by Yahoo for

over one billion dollars has dramatically increased its Web presence and potential influence (de la Merced, Bilton, & Perloth, 2013; Tumblr, 2014). Although Websites such as Facebook make headlines, it is actually the growing segment of “anonymous” social networking sites (such as Tumblr) where individuals are more likely to search for information about potentially dangerous or harmful behaviors and “over-share” positive sentiment toward substance use and recent recreational drug purchases (Myslín, Zhu, Chapman, & Conway, 2013; O’Neill, 2013). Emerging forms of behavior, such as HTS, are particularly emphasized on these constantly updated and changing forums (Deluca et al., 2012). Therefore, the information gathered from systematic analysis of these postings may be extremely valuable for the development of innovative interventions (Davey, Schifano, Corazza, & Deluca, 2012; Deluca et al., 2012).

Our literature review found only one major study that has focused on representations of hookah tobacco smoking in social media. This study found that internet user-generated videos on YouTube related to cigarette smoking often acknowledge harmful consequences and provide explicit antismoking messages but hookah-related videos do not (Carroll et al., 2013). Additionally, this study collected general characteristics of the sample, such as sex, age, and race of the recorder, as well as depictions of smoking in the videos including humor, attractiveness, power, sexuality, sociability, and exoticness. Other elements like tricks, fetishism, how-to instructions, and music, were among the emerging themes found in the hookah-related videos (Carroll et al., 2013). However, to our knowledge no study has specifically examined sex differences in the portrayal of HTS in social media. Therefore, we conducted a systematic quantitative content analysis of hookah-related images on Tumblr. Because of potential differences according to sex described above, we wished to focus in particular on comparing content posted by and about males and females.

METHODS

Design

We performed a content analysis of user-posted material on Tumblr related to HTS. We focused on comparisons by sex, which as noted above was an important aspect of the study.

Sample Selection

We systematically collected a sample of 160 Tumblr posts in June 2013. A “post” is defined as an image with or without text which was uploaded to the Tumblr site at one point in time (see Table 4). In order to standardize sample selection, we selected the post instead of the thread (which includes a series of postings over time) as our unit of analysis; had we assessed threads instead, we would have included large amounts of information that were uncommonly viewed or mentioned. Our objective with this systematic process was not to collect a random sample, but to obtain a broad sample of the most commonly viewed posts (Carroll et al., 2013; Forsyth & Malone, 2010). We stratified collection times by day (weekday vs. weekend) and time of day (morning vs. evening) in order to gain a broad sample. We used two key search terms: “hookah” and “shisha,” which refers to the flavored and sweetened tobacco used in a hookah. While other terms such as “waterpipe,” “water-pipe,” “narghile,” and “gyoza” are synonymous with “hookah,” these terms tend to be used

in technical reports rather than colloquially by users. Therefore, they were less relevant to our purposes. We used the built-in Tumblr main search function to retrieve the top 20 posts for each time period and each term. Twenty posts is often suggested in the information science and public health literature, because users tend to less frequently read beyond this number of posts (Leighton & Srivastava, 1999). Therefore, we retrieved 20 x 2 terms (hookah and shisha) x 4 time periods (morning/weekday, morning/weekend, evening/weekday, evening/weekend), or 160 posts. To obtain the final sample, we eliminated duplicate posts (e.g., if the same post was obtained using the term “hookah” and the term “shisha”). We also eliminated irrelevant posts, which we defined as posts which did not involve tobacco or shisha use with a hookah. This might occur, for example, if someone posted a picture of her cat, whose name was “Shisha.” After elimination of duplicates (n=16) and irrelevant posts (n=4), 140 posts remained for analysis.

To ensure integrity of the data and to facilitate analysis, we saved a portable document file (pdf) of each image and text on the day of the search. This was important because posts can be later deleted or modified.

Codebook Development and Procedures

Three researchers with training in content analysis [initials removed for blind version] developed a preliminary codebook based on both a grounded theory approach adapted for medical qualitative research by Crabtree and Miller (Crabtree & Miller, 1992) and guided by previous research in this area (Carroll et al., 2013). In this approach, constructs selected for coding are “grounded” in the data rather than obtained from a particular conceptual or theoretical framework. Focusing on text and images provided, the researchers assessed a random sample of 20 posts during this process. After independently finding emerging key themes and looking for those already established by previous work, they discussed the themes with each other and combined similar coding for themes. Subsequently, they met with an additional researcher [initials removed for blind version] to address potential questions and refinements of coding.

After the 4 researchers clarified the definition of each code, they developed a final codebook that outlined specific inclusion and exclusion criteria for each code and included examples of text and images that met these criteria. Then two of the initial coders [initials removed for blind version] worked independently to review and code each of the 140 videos in its entirety. Interrater reliability (Cohen’s κ) ranged from 0.56 to 1.00 (Cohen, 1960). When there were discrepancies, both coders met with the lead author to discuss the discrepancy and achieve consensus. Using this process, all codes were easily adjudicated and a final data set was obtained. While all content measures (e.g., presence of sexuality) were double-coded, demographic data (e.g., sex and race) of posters and participants matched precisely in initial double-coding and were thus single-coded for the remainder of the posts.

Measures

Sociodemographic characteristics of posters—We used 11 codes to describe the demographic characteristics of the poster, if they could be determined by the coders. Age was categorized as <18, 18 or older, or unclear. The cut-point was made at 18 because

tobacco use is generally legal at this age in the United States. Coders also used dichotomous variables to assess sex and multiple racial and ethnic categories. In addition to standard racial and ethnic categories (e.g., Caucasian, African-American, Asian, Native American, and Hispanic), coders assessed Middle Eastern (e.g., Lebanese) and South Asian (e.g., Indian) ethnicity because individuals in these groups were identified during the coding and code development process. This is not surprising, given that hookah use has history and roots in the Middle East and South Asia. Nationality, which many Tumblr users provide, was also recorded.

Sociodemographic characteristics of individuals depicted—Individuals pictured in the image or described in the text were categorized using similar demographic characteristics as those described above. Coders also indicated the number of people pictured.

Content of the post related to hookah—Coders used 5 variables to indicate the presence or absence of an image of the hookah pipe itself, specific reference to a hookah/shisha flavor, reference to an “e-hookah” (analogous to an e-cigarette), hookah smoke pictured in the image, and whether “tricks” were being performed using the hookah. For transparency and consistency, this last variable was further defined as whether there was “manipulation of hookah smoke for aesthetic effect, blowing smoke through an object, or inhaling or exhaling in complex and/or unnatural ways.”

Content of the post related to other substances—Coders used 3 variables to assess whether there were textual or visual references to each of the following substances: tobacco other than that in a hookah (e.g., cigarettes or cigars), alcohol, or marijuana.

Content of the post related to sexuality—Using a dichotomous variable, coders assessed whether the post depicted sexuality, which was indicated if any of the 4 criteria were met: (1) a sexual act (defined with at least the intimacy of open-mouthed kissing) was depicted in the text or image, (2) a subject was scantily clad, defined as less than 50% of the body being covered, (3) a subject exhibited sexual body language or positioning, such as an individual’s tongue licking her own lip in a characteristic fashion, or (4) an object such as a hookah was used as a phallic or yonic symbol (i.e., a symbol pertaining to the female genitalia). In addition to the main sexuality variable, details such as the specific body parts visible or the particular phallic or yonic symbol used were captured in open text fields.

Other relevant content of the post—Coders also described other emerging themes that were identified during the coding process and therefore deemed relevant. For example, the presence of body art, such as tattooing or henna, frequently appeared in the postings. Additional examples of relevant content included images with cultural significance (such as Middle-Eastern tapestries) and presence of food or beverages.

Open-ended data—In addition to the specific codes described above, coders utilized multiple text fields to further describe and characterize the depicted information.

Analysis

We first used descriptive statistics to assess (A) sociodemographic characteristics of posters, (B) sociodemographic characteristics of individuals depicted in the post, and (C) other post content, such as presence of a hookah image, smoke, hookah tricks, alcohol, sexuality, and food and beverages. Then, we calculated each of the variables described in (C) above for both male and female posters and compared these percentages using chi-square analyses. We did this because, as described in the introduction, we were interested in focusing on sex differences. For these quantitative analyses, we defined statistical significance using a two-tailed alpha of 0.05 and conducted all analyses in Stata version 12.0 (Statacorp, College Station, TX). Finally, in addition to these quantitative assessments, we gathered characteristic examples of each of these codes in order to illustrate them to readers.

RESULTS

Sociodemographic characteristics of posters

Of the sample of 140 posts, 69% (96) were posted by females, 21% (30) by males, and 10% (14) by individuals whose sex was unclear. The majority (46%) of posters were 18 years of age or older, followed by those under 18 (35%) and posters of unknown age (19%). Racial/ethnic information was available for 81% (114) of posters, of which 53% were Caucasian, 20% African-American, 11% Hispanic, 9% Asian, 8% Middle Eastern, 3% South Asian, and 12% mixed race or ethnicity. Because race and ethnicity categories were not mutually exclusive, these numbers sum to more than 100%. The nationality or location of the poster was identifiable in 76 posts, with the vast majority being from the United States (66%) followed by Germany (9%). Other nationalities are as noted in Table 1.

Sociodemographic characteristics of individuals depicted

In the final sample, 26% of posts contained no individuals, about half (52%) depicted 1 individual, 14% depicted 2, and 8% of posts depicted 3 or more individuals. There were more than twice as many posts depicting only females compared with only males (41% vs. 19%). The remainder of posts contained either several individuals of both sexes (10%), individuals whose sex was unclear (1%), or no individuals, in which case no sex was recorded (29%). Race/ethnicity of individuals depicted in posts was available for 53% (74) of our sample, of which 50% were Caucasian, 24% African-American, 11% Hispanic, 8% Asian, 7% Middle Eastern, 3% South Asian, and 23% mixed races or ethnicities within the post (Table 2).

Other post content

Our sample contained images of hookah pipes in 61% of posts. Hookah tobacco flavors and e-hookahs were each present in 9% of posts. Finally, smoke was present in 55% of posts and “tricks” were present in 18%. Marijuana-related images or references appeared in 11% of posts, alcohol in 6%, and other forms of tobacco (e.g., cigarettes) in 2%. Sexuality was coded in nearly a fourth of posts (24%), socializing with 2 or more people in 22%, and food or beverages in 9% of posts (Table 3). Examples of all codes, along with eternal Web links to posts, are provided in Table 4.

Other post content by sex

As depicted in Table 3, males more frequently posted hookah images compared with females (77% vs. 56%, $P = .045$) as well as alcohol-related images or references (17% vs. 3%, $P = .008$).

DISCUSSION

Our systematic assessment of hookah-related content on Tumblr found the most prominent features portrayed by all posters included references to or images of hookahs themselves, sexuality, socializing, alcohol, hookah smoke, and “tricks” performed with hookah smoke. Second, corresponding to our focus on sex differences, we found that more than three-fourths of those posting this content were female (77% of those whose sex was able to be determined). Additionally, compared with females, males more frequently posted hookah images and alcohol-related images or references. Finally, when age could be determined, 35% of posters were under 18 years of age.

The most prominent features portrayed by posters included hookahs themselves, sexuality, socializing, alcohol, hookah smoke, and “tricks” performed with hookah smoke. These findings parallel previous research on HTS portrayals on YouTube, which also used a grounded theory approach and found that 15% of their sample of hookah-related videos contained sexuality, 36% sociability, and 52% tricks (Carroll et al., 2012). It is not surprising that hookahs themselves are commonly displayed visually, because they can be beautiful, shiny implements made from intricately carved metal or colorful glass. Hookahs can also be made in complex shapes, such as animals or fruit. They can also be small and highly portable, or taller than a person. Cigarettes have been used as powerful symbols in advertising and other visual media. However, because of the richness and variety possible for hookahs, they may ultimately be even more interesting as visual material. The association between hookah portrayal and sexuality is consistent with prior work demonstrating associations with cigarette smoking and sexuality (DuRant et al., 1997). However, again hookah smoke may ultimately be even more visually appealing because it is wispiest and easier to manipulate with “tricks.” Images or text featuring games or tricks may support the misconception that HTS is not harmful. However, collecting additional data on these issues from young people—for example via focus groups or individual interviews—would help to illuminate the role of games and tricks in images which cannot be inferred from content analysis alone.

It is informative that, among those whose sex could be determined by coders, a substantial majority of posters were female compared with male (77% vs. 23%). This finding is despite the fact that Tumblr users are known to be equally divided among females and males (DeSilver, 2013). Because only 10% of posters had unclear sex, even if all of these individuals were male, there still was a preponderance of female posters. This is particularly interesting because national studies have determined that males smoke hookahs more frequently; for example, one study of over 100,000 college students showed that ever HTS rates were 35.1% for males and 28.1% for females ($P < .001$) (B A Primack et al., 2013). One reason why females may wish to share and disseminate HTS experiences is because, according to other research involving tobacco, they tend to appreciate tobacco-related

experiences which are more social (Haines, Poland, & Johnson, 2009; Poland et al., 2006), which tends to be the case for HTS. Although females have also been drawn to tobacco for reasons of weight control (Copeland & Carney, 2003; French, Perry, & Fulkerson, 1994; McKee, Nhean, Hinson, & Mase, 2006), we did not note references to use of tobacco for weight control in our sample. It may be that the public forum of Tumblr does not lend itself to this type of self-disclosure or that cessation of hookah use is not associated with weight gain. Nevertheless, given the strong association between weight and smoking, it may be valuable for future analyses involving hookah to investigate its relevance to weight.

Males were more likely than females to include an image of a hookah (77% vs. 56%). While this may consciously or subconsciously be because hookah pipes can be represented as potent symbols, often phallic in nature, this conclusion is speculative at this point and may be interesting to assess in future qualitative work. Compared with females, males also more commonly posted alcohol-related content in association with HTS (17% vs. 3%). Prior work has also connected alcohol, cigarettes, and masculinity in this way (DuRant et al., 1997). Whatever the specific reason for this association, it may be valuable to consider including alcohol-related issues when developing interventions targeted at males in particular.

It is also noteworthy that a substantial number of posts were submitted by individuals under 18 years of age (35%), the current legal age for tobacco purchase in the United States. The volume of posts by younger users suggests that the unregulated nature of HTS may be alluring to this age group and even more attractive, given the somewhat anonymous and popular medium of social networking sites such as Tumblr. We know from previous research (Dalton et al., 2003; B A Primack, Land, & Fine, 2008; Sargent et al., 2005) that exposure to tobacco-related media messages and tobacco use (initiation and maintenance) are associated among this younger age group. While research has focused primarily on media exposure through movies and music, today Tumblr has a growing presence in the lives of adolescents; over half of all U.S. teens consider Tumblr their favorite social network, and 14% of the class of 2014 use it daily (C. Smith, 2014). Therefore, exposure to tobacco-related messages on this platform may also influence this target demographic.

Our use of Tumblr was valuable for several reasons. First, it provided easy access to user-generated images and text, as noted in Table 4. This type of naturalistic data can prove to be a rich, valuable supplement to other forms of data collection such as questionnaires. Even more in-depth, purely qualitative assessments of data such as these would be valuable in the future. Data such as these are also potentially valuable because of their immediate availability. Because the landscapes of both substance use and social networking are transforming and expanding daily, structured analyses such as this one can provide information nearly in real time. Because many traditional social networking sites such as Facebook require identifying information, users may self-censor. For this reason, research using sites such as Tumblr, on which users can remain more anonymous and therefore may be less inhibited may reflect more accurately the way individuals use HTS. Additionally, because individuals seeking anonymous information about substance use may tend toward this type of site, it may also be useful to leverage Tumblr to deliver interventions.

It is important to note that there are inherent limitations in content analysis because of subjectivity. While we attempted to minimize this concern with a systematic process involving double coding of all data and formal adjudication, different coders may have disagreed with some of our ultimate determinations. Studies of user-generated content such as this are also inherently limited because we accessed these data at only one point in time. Although we tried to minimize this limitation by sampling at four different times, our results nevertheless are not from a truly random sample. Therefore, they may not be generalizable to other samples of user-generated posted material, especially over time. Additionally, our use of passive content analysis limited our ability to assess variables which may have been relevant, such as concerns about weight, because we were constrained to the content that individuals chose to post. For this reason, it may be particularly valuable for future research in this area to assess some of these questions more directly, for example with individual interviews. Finally, some variables had relatively low Cohen's κ values. However, in these cases percent agreement was still high; was low because of this statistic's reliance on the prevalence of the code. For example, agreement on presence of cigarettes was about 99%, but this translated into a Cohen's κ value of 0.56 because of the low prevalence of cigarettes overall.

Despite these limitations, it is interesting that 77% of individuals posting systematically determined hookah-related messages were female, despite the known increased prevalence of HTS by males. While females may wish to share this information because they tend to appreciate tobacco-related experiences which are more social and involve flavoring, this question deserves further study. We also found that posts commonly involved images of hookahs themselves, sexuality, socializing, alcohol, hookah smoke, and "tricks," and that males more frequently posted hookah images and alcohol-related images or references. These initial gleanings may inform preliminary development of interventions aimed at curbing HTS.

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Table 1

Sociodemographic Characteristics of Individuals Posting Content (N = 140).

Characteristic	Percentage
Sex	
Female	69
Male	21
Unclear	10
Age	
Under 18	35
18 and over	46
Unclear	19
Caucasian*	
No	47
Yes	53
African-American*	
No	80
Yes	20
Asian*	
No	91
Yes	9
Hispanic*	
No	89
Yes	11
Middle Eastern (e.g., Lebanese or Jordanian)*	
No	92
Yes	8
South Asian (e.g., Indian or Pakistani)*	
No	97
Yes	3
Mixed Race/Ethnicity*	
No	88
Yes	12
Nationality/Location [†]	
American	66
German	9
British	4
Columbian	4
Other	17

* Percentages are based upon the 114 posters from whom these data were available.

† Percentages are based upon the 76 posters from whom these data were available; other categories included Brazilian, Canadian, Estonian, Hungarian, Maltese, et al.

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Table 2

Sociodemographic Characteristics of Individuals within Content (N = 140).

Characteristic	Percentage
Number of People	
0	26
1	52
2	14
3+	8
Sex	
Female	41
Male	19
Mixed	10
Unclear	1
None	29
Age	
Under 18	13
18 and over	39
Unclear	48
Caucasian *	
No	50
Yes	50
African-American *	
No	76
Yes	24
Asian *	
No	92
Yes	8
Hispanic *	
No	89
Yes	11
Middle Eastern (e.g., Lebanese or Jordanian) *	
No	93
Yes	7
South Asian (e.g., Indian or Pakistani) *	
No	97
Yes	3
Mixed Races/Ethnicities within Post *	
No	77

Characteristic	Percentage
Yes	23

* Percentages are based upon the 74 posts from which these data were available.

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Table 3

Content of 140 Tumblr Posts by Poster Sex.

Post Content	All	Female	Male	P*	Cohen's κ [†]
Hookah Image				.045	.85
No	39	44	23		
Yes	61	56	77		
Hookah Tobacco Flavor				.29	.83
No	91	91	97		
Yes	9	9	3		
Electronic Smoking Device				.65	1.00
No	91	91	93		
Yes	9	9	7		
Smoke				.31	.90
No	45	43	53		
Yes	55	57	47		
Tricks				.88	.69
No	82	81	80		
Yes	18	19	20		
Alcohol				.008	.78
No	94	97	83		
Yes	6	3	17		
Cigarettes				.58	.56
No	98	99	100		
Yes	2	1	0		
Marijuana				.45	1.00
No	89	89	93		
Yes	11	11	7		
Sexuality				.08	.61
No	76	74	90		

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Post Content	All	Female	Male	<i>P</i> [*]	Cohen's κ [†]
Yes	24	26	10		
Food/Beverage				.31	.69
No	91	93	87		
Yes	9	7	13		
Socializing				.67	.81
0-1 Person	78	77	73		
2+ People	22	23	27		

* Significance value determined by chi-square test. Bold values are significant at a level of $p < .05$ or less.

† Measuring inter-rater reliability of coders.

Table 4

Coding examples selected from 140 hookah-related Tumblr posts.

Coding Category	Example*	Description
Hookah Image	http://www.webcitation.org/6NKv1erWI	Subject, presumably female, lies on the floor with her legs extended vertically up the wall; one leg crossed in front of the other, donning strappy platform black high heels, cut off denim shorts, and a shirt with midriff exposed. A hookah can be seen sitting on the floor behind her, its hoses wrapped around its neck, resembling the female's pose.
Hookah Tobacco Flavor	http://www.webcitation.org/6NKvFpslA	The face of a male is shown looking into the camera, holding a hookah hose; the mouthpiece in his mouth, smoke seeping out from behind his hand and filling the rest of the frame with a hazy ethereal effect. The words, "VIP All Dat Way Necro Hookah Thanks to God," appear above the photo.
	http://www.webcitation.org/6NKvPj65w	Three colorful canisters of hookah tobacco are being held: Nirvana Dokha Infused Shisha, Starbuzz Exotic Safari Melon Dew Tobacco, and Something Girlie Tobacco Co.-That's What Shisha Said. Text below the picture reads, "Always gonna be the crazy broad who comes into a smoke shop and drops \$12.50 over some new shisha. Got some Dokha infused shisha, some new "Something Girlie" shisha called That's What Shisha Said and my favourite Starbuzz; Safari Melon Dew. #shisha #starbuzz #dokha #nirvana #somethinggirlie #addict"
	http://www.webcitation.org/6NKvVgCto	A hand holds a round pink and yellow canister of Social Smoke Pink Lemonade Hookah Pipe Tobacco. Text below says, "Best flavor I've bought".
	http://www.webcitation.org/6NKvZ8YvL	A female with long hair, wearing a strapless shirt or dress, wearing earrings and several rings, looks seductively into the camera in 2 of 3 paneled photos, exhaling a puff of smoke. In the middle picture, she is inhaling from a hookah pen.
Electronic Smoking Device	http://www.webcitation.org/6NKvk5goH	A black electronic hookah is held by a hand with long artificial nails painted in a black sparkly polish in a series of 2 photographs. The first focuses on the brand name, "Fantasia Electronic Hookah," and the second focuses on the words, "Adios m@#%+!" It is unclear if this phrase is an expletive. It could also be an oblique way of saying, "Adios matches!"
Smoke	http://www.webcitation.org/6NKwoXrLQ	A young female with long blondish hair and blue eye make-up leans toward and looks into the camera as she exhales a puff of smoke, open-mouthed. Smoke permeates the picture. Text below the photo includes, "#hookah".
	http://www.webcitation.org/6NKvLQetf	A short video displays a red hookah with several yellow mouthpieces sitting on a graffiti-covered table. Three individuals are seen sitting around the table-2 females and one male. The male inhales from the hookah, leans down, exhaling a large puff of smoke onto the table surface, creating a cloud of dense smoke, into which he runs his hand, sending the smoke curling upward.
Tricks	http://www.webcitation.org/6NKwqf7A8	A black and white filtered image of a male wearing professional sports team attire exhales rainbow colored smoke out of his nose and the corners of his mouth, while furrowing his brow.
	http://www.webcitation.org/6NKwzr4nl	A series of 5 photographs show a male with short blond hair in front of a screened window with light streaming in on his face as he exhales and blows several smoke rings.
	http://www.webcitation.org/6NKx2bBTP	A bottle of Smirnoff vodka is on a table surrounded by other items including a hookah, candles, lighters, cocoa butter, a glass pipe, hookah tobacco, a cell phone, a bag filled with marijuana, and several business cards.
Alcohol	http://www.webcitation.org/6OaJILoCA	A muscular man wearing a black tank top sits on a black couch while holding a bottle of champagne on his knee. In the foreground is an illuminated table with the text "Elkrasso" running around the rim. A hookah pipe sits on the table. The background wall is white, with a purple light shining on it. On a black counter that comes out of the wall sits a vase, cups, and a copper war helmet with plumeage. There is a mirror behind the couch.
	http://www.webcitation.org/6NKxhx7Pj	An attractive female with long unruly blond hair looks innocently into the camera with a lit half-smoked cigarette dangling from her lips.
Cigarettes	http://www.webcitation.org/6NKxeRtYJ	Hand-rolled cigarettes or marijuana joints have been arranged, like Lincoln Logs, in a crisscrossed fashion to form a stack, with the text below, "Let's build house."

Coding Category	Example*	Description
Marijuana	<p>http://www.webcitation.org/6OaI3H5Q8</p> <p>http://www.webcitation.org/6NKx7NFzI</p>	<p>Post entitled, "Actual convo with my dad," reads: Dad: What do you smoke in this hookah? Me: Marijuana Dad: Figured Dad: They'll put you in jail for that here go to Colorado</p> <p>The first photograph features a male wearing a shirt with pipes and marijuana leaves on it. The second batch of photographs contain a marijuana plant, a lighter, what appears to be a blunt, and a male holding a hose and exhaling smoke, with the text, "Just harvested my first plant and it was the best feeling to smoke something you personally grew!!"</p>
Sexuality	<p>http://www.webcitation.org/6NKxnFegs</p> <p>http://www.webcitation.org/6OULEyfiZ</p>	<p>Two young women with long hair, wearing low-cut and sleeveless shirts, face one another with closed eyes, only an inch or 2 apart, provocatively blowing smoke into each other's mouths.</p> <p>An short video shows a woman with long brown hair slowly exhaling smoke. She wears a low-cut white tank top and bright red lipstick. The camera shows her nose, mouth, and chest. The subject's left eye is visible but only for a moment. The background appears to be dimly lit while the woman sits in strong lighting for contrast. There appears to be a window in the top right corner of the video, indicating she is indoors. Text above the video reads, "everything sweet aint sugar coated."</p>
Food or Beverage	<p>http://www.webcitation.org/6NKxp2fAF</p> <p>http://www.webcitation.org/6OUKITKGh</p>	<p>One female exhales smoke, with her head tilted back, lips and eyes open, while another, sitting next to her, holds a glass and straw with an unidentifiable beverage in it. It appears as though they may be sitting in a lounge, with couches and a pillow visible in the background.</p> <p>Three women and one man sit around a wooden table with a hookah pipe sitting on the floor in front of them. The table holds a plate of food, several tea cups, and a menu. The woman wearing teal pants holds a silver hose that seems to connect to another hookah not seen in the picture. No faces are seen, only torsos and thighs are visible.</p>
Socializing	<p>http://www.webcitation.org/6NKxt5aui</p> <p>http://www.webcitation.org/6OUJvvi00</p>	<p>Six people are at least partially visible, all sitting or lying on blankets in the grass outside on sunny day around a tall silver hookah. Two people are kissing and one male is smoking from the hookah.</p> <p>Black and white image with the white text "We are the wasted youth" at the bottom. Five people are visible from the knee down wearing jeans and sneakers. They sit across from each other on two benches with two hookahs between them and a drawing of a skull in the background.</p>
Body Art or Jewelry	<p>http://www.webcitation.org/6NKxts6vk</p> <p>http://www.webcitation.org/6NKxwS9XK</p>	<p>A series of photographs depict a young woman, who in the first, is shown alone in black and white, her hair appears to be shaved and blond. She has multiple facial piercings; at least one nose, 2 lip, and 10 earrings are visible. In the second, she is seen next to another young woman, who is also pierced in the ear and nose and is exhaling smoke while tilting her head toward the first woman.</p> <p>Two hands are extended, covered in identical tattoos: monkey-like animals with tongues out, red eyes, wearing helmets that say, "Don't" across the forehead. The fingers are tattooed with a star and the letters, "F T Y". Between the tattooed hands is a hookah with the words, "Keep Calm and Smoke Shisha".</p>

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