

Original Article

WHAT ARE WE LEARNING ON SOCIAL MEDIA ABOUT SHISHA? A CASE STUDY OF TOP 50 SHORT ENGLISH YOUTUBE SHISHA VIDEOS

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Abstract

Background: Shisha smoking is a cause of tobacco-induced diseases. There are numerous videos publicizing shisha smoking on social media. This study assessed the 50 most viewed short English shisha videos on YouTube.

Material and Methods: Using a filtered single search of short YouTube English videos tagged shisha, top 50 videos were downloaded between 2:15pm and 6:00pm (GMT +1) on January 19, 2020. Quantitative and qualitative data were obtained from the videos and analysed.

Results: The analysed videos had a mean (\pm SD): view rate of 1,917,311.71 (\pm 8,001,059.574) views, like rate of 17,953.92 (\pm 75,945.679) likes, and dislike rate of 1,243.26 (\pm 5,454.373) dislikes. Thirty-five videos showed a scene where male person(s) was/were smoking shisha, 34 showed scenes of indoor shisha smoking, and 3 showed scenes where shisha mouthpiece is shared among persons. However, only 5 videos relayed information about the dangers of shisha smoking to viewers. Furthermore, analysis of the additional notes attached to many of these videos showed that most of the videos were uploaded primarily to: teach their viewers on how to make/smoke shisha; and/or advertise the latest shisha brands.

Conclusion: There are diverse videos publicizing shisha on the YouTube media; while many of these videos encouraged shisha smoking practice, only few of them discouraged such.

Keywords: Shisha, Water-pipe, Hookah, Tobacco, Smoking, Social media, YouTube, Impact, Behaviour, Education.

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INTRODUCTION

Shisha

Shisha smoking is phenomenal problem of global health importance and the problem had been subtly bedeviling mankind for a very long time.¹ The history of shisha smoking can be traced back to around 1,400 AD when the practice began in the Middle East and Indian subcontinent.¹ However, due to the influence of civilization, the practice has spread across every part of the world.² Shisha smoking, also known as hookah/narghile/hubble, bubble/water-pipe smoking,

according to the British Heart Foundation, is a way of smoking tobacco, sometimes mixed with fruit or molasses sugar, through the mouthpiece of a bowl hose or tube.³

Shisha is a rich source of smoked tobacco and tobacco is a known cause of tobacco-induced diseases in the human body.^{1,4} However, there is an existing paradox about shisha smoking; many people believe that shisha smoking can cause only little or no harm.^{5,6} In fact, many shisha smokers were of the opinion that shisha smoking is not as dangerous as cigarette smoking.^{5,6} Scientific investigations have shown that shisha smoking is more

dangerous than cigarette smoking.⁷⁻¹² The smoke from shisha contains high content of furans, nicotine, nitric oxide, carbon monoxide, volatile aldehydes (e.g. formaldehyde, acrolein, methacrolein, etc.), carcinogenic polycyclic aromatic hydrocarbons, and nanoparticles.⁷⁻¹² Furthermore, notorious infections like hepatitis B and tuberculosis can be transmitted through sharing of the mouthpiece of a shisha hose.⁸

The prevalence of shisha use is on the rise as more and more people are engaging themselves in shisha smoking habit.¹³⁻²⁰ As a matter of fact, shisha smoking is commonly considered as a social behaviour in many parts of the world; hence little to no social stigma is attached to shisha smoking.¹⁸⁻²⁰

Social Media

Social media is a very powerful tool for information sharing in the 21st century; be it health-related or otherwise. In fact, about 3.5 billion people are daily active users of social media; this is about 45% of the world's total population.²¹ On social media, information can be widely transmitted or shared in the form of messages, videos, audios, and pictures. Among these forms, the video is the most informative of all, as it captures both audio and visual components of information, unlike the other forms.²² Also, behaviours can be formed, stopped, or modified through information obtained from social media.²³

YouTube

The most commonly used social media platforms through which videos are publicly transmitted or shared is YouTube.²⁴ YouTube has about 2 billion active users.²⁴ There are so many videos that can be watched on the YouTube without necessarily being a subscriber to a YouTube channel. YouTube media, according to it, was managed based on four key values of freedom which are: freedom of expression; freedom of information; freedom of opportunity; and freedom to belong.²⁵

Shisha smoking & social media

Based on our experience, as shisha researchers and active users of social media, we have witnessed occasions where shisha videos and pictures are transmitted or shared on social chat rooms, television stations, internet, and more. Without mincing words, sharing of shisha videos on social media is not an unpopular event.

Aims & objectives

After extensive literature search on studies ever conducted on shisha, we found no study assessing shisha-related videos on social media. Interestingly, there are numerous shisha-related videos on social media. In as much that the social media is a key influencer of human behavior,²³ it becomes imperative to conduct a study to assess the contents of shisha videos transmitted or shared on social media. Based on the above, we conducted this study with the aim of quantitatively and qualitatively assessing the 50 most viewed short English shisha videos on social media, using YouTube as a case study.

Relevance of the study

Conducting this type of study is of high relevance in the area of shisha tobacco control and tobacco-harm prevention. The data obtained from this study will provide vital information on the content of information shared on YouTube videos; hence, providing guidance on how to develop strategies in re-educating the public about shisha use.

MATERIAL AND METHODS

This study was an online cross-sectional survey assessing the metrics and content of short YouTube English videos on shisha using a mixed method approach. The tool used for the data collection was a proforma (Table 1).

An online filtered single search of all videos tagged "shisha" was done on the YouTube App of an Android phone, using the keyword "shisha". The search was filtered by selecting "view count", "video", "anytime", and "short (< 4 minutes)" options in the "sort by", "type", "anytime", and "duration" tabs, respectively, under the "search filter" command (Figure 1). Out of the first 107 videos that popped up, only 50 of them were English; these videos were then downloaded for watching. Using the proforma, the quantitative data (on the metrics and video content) and the qualitative data (on the additional notes attached to the video) of each of the English videos was also obtained alongside. The data collection process was conducted between 2:15pm and 6:00pm (GMT +1) on January 19, 2020.

Data Analysis

Collected quantitative data was entered into SPSS version 20 software for data analysis while the qualitative data were analysed thematically. In the quotations given to support the thematic findings, we deliberately denoted

brand names as well as the names of geographical areas, companies, and cultures with “[...]” for the sake of anonymity. Quantitatively, the frequency distributions of all variables were determined. The mean and standard deviation of relevant frequencies were also determined.

Ethical Considerations

This study was also conducted in accordance with the 1964 Helsinki Declaration on health research.

RESULTS

Video Metrics

A total of 50 short English YouTube videos on shisha were analysed for this study (Table 2). These 50 videos have a mean (\pm SD): time of upload of 5.64 (\pm 3.348) years, view rate of 1,917,311.7 (\pm 8,001,059.6) views, like rate of 17,953.9 (\pm 75,945.7) likes, and dislike rate of 1,243.3 (\pm 5,454.4) dislikes, as at the download date: January 19, 2020.

Quantitative Information Extracted from Videos

Only 10 videos, out of the entire 50, did not show person(s) smoking shisha. Among the remaining 40 videos, 35 showed a scene where male person(s) is/are smoking shisha, 34 showed scenes of indoor shisha smoking, and 3 showed scenes where shisha mouthpiece is shared among persons. Importantly, only 5 videos relayed information about the dangers of shisha smoking to viewers (Table 3).

Additional Notes Attached to the Videos

Furthermore, qualitative analysis of the additional notes attached to the videos by the video sources showed that some of these shisha videos were uploaded to teach the viewers on how to make shisha, with no warnings given about the risk of shisha smoking in the notes:

“In this video you could learn how to make hookah out of [...] bottle (or any other plastic bottle)...” Video #1: views – 52,192,309; likes – 501,000; dislikes – 38,000

“...I made this video to teach you how to make and setup a perfect hookah. I cover everything you'll need to know like how to prepare materials, how to set up a hookah, how to pack a hookah bowl, how to light a hookah coal, and how to smoke a hookah...” Video #4: views – 2,187,894; likes – 15,000; dislikes – 1,200

“Smoking tobacco from a hookah is a major step up from smoking dry cigarettes...If you don't have a place nearby to buy a hookah, then you can create your own out of

household items...” Video #8: views – 1,180,928; likes – 9,400; dislikes – 637

However, some videos had notes on how to make shisha theoretically and further gave warnings of the dangers associated with practicing the acts in such videos in reality:

“...The hookah in this video was made only for demonstration how it works...Smoking is definitely bad for your health, so please watch this video only as entertainment...” Video #9: views – 1,119,600; likes – 6,500; dislikes – 614

“...This video is intended for educational and scientific purposes only. Every action performed in this video is done under experts' supervision or in the presence of adult...Do not try this at home” Video #22: views – 276,165; likes – 3,300; dislikes – 304

Also, some videos were uploaded with notes on shisha brand, purposely for advertisement:

“[...] Rechargeable Electronic Shisha is the latest innovative technology in this emerging market. Used with [...] e liquid, the [...] is a supremely powerful device with a long-lasting battery. Choose from strawberry, apple, grape, cherry or peach shisha e liquid in either nicotine free, or 16mg nicotine content. New flavours coming soon.” Video #12: views – 916,348; likes – 3,700; dislikes – 323

“The new shisha pen. Pretty good. Not harmful. Contains no nicotine...” Video #25: views – 226,513; likes – 215; dislikes – 69

“...The [...] shisha pipe embodies all the elements of [...]’s world famous and critically acclaimed artisanal heritage, hand blown glass, hand-made ceramics, a pioneering use of leather working techniques and reindeer antler carvings of the indigenous [...] people. This delicate balance of traditional craftsmanship and state-of-the-art engineering is a defining feature of all [...] shisha pipes.” Video #26: views – 225,499; likes – 1,300; dislikes – 58

“The [...] is a highly-rated refillable electronic cigarette that employs a tank system for smoking tobacco-free e-liquid. When fully charged and filled with e-liquid, the [...] e-cig will give you up to 500 puffs. This e cigarette can be charged right at your computer with the provided USB

charger.” **Video #44: views – 107,600; likes – 133; dislikes – 13**

However, only very few videos have notes that educated the viewers on the dangers associated with shisha use:

"People may not realize just how dangerous water-pipes are; one session can be equal to 100 cigarettes." **Video #14: views – 723,900; likes – 1,900; dislikes – 77**

"The toxins in hookah smoke may be different from that of cigarette smoke, but that doesn't make it any less harmful, according to a new study." **Video #14: views – 723,900; likes – 1,900; dislikes – 77**

"Similar to cigarettes, hookah smoking delivers the addictive drug nicotine and it is at least as toxic as cigarette smoking." **Video #14: views – 723,900; likes – 1,900; dislikes – 77**

Table 1. Questions asked in the pro-forma used for data collection

No.	Questions
1	How many years ago has this video been uploaded?
2	How many views does this video have?
3	How many likes does this video have?
4	How many dislikes does this video have?
5	Does this video show a person (or group of persons) smoking shisha?
6	If yes to Question 5, what is/are the sex (or sexes) of the person(s) smoking shisha in the video?
7	If those smoking shisha in the video are more than one, were they sharing shisha mouthpiece?
8	Does this video relay information about the harms associated with shisha use?
9	Additional notes attached to the video

DISCUSSION

Tobacco is an endemic and colossal public health problem causing illnesses, deaths, and impoverishments worldwide.²⁶ In fact, there are about 1.1 billion smoked tobacco users worldwide,²⁶ and its use accounts for the deaths of over 8 million people on yearly basis.²⁶ Despite the huge burden of tobacco-associated deaths in the world, tobacco control policies and laws in many countries are restricted, with so much attention placed majorly on cigarette control only.^{2,27} As earlier mentioned, shisha smoking is more lethal than cigarette smoking, having much more tobacco-associated risks than cigarettes.⁷⁻¹²

In this study, we analysed the most viewed 50 short English YouTube shisha videos; our analysis yielded noteworthy findings that are of public health concern. Starting with the metrics of the analysed videos, we found that these videos are viewed and liked by many people.

The whole world is made up of about 7.8 billion people.²⁸ Based on our finding, it can be estimated that an average of about 1,917,311.71 people had viewed at least one of the 50 short English shisha videos on the YouTube media; hence, it can be estimated that about 1 person out of every 4,068 persons (1,917,311.71 / 7,800,000,000) in the world have viewed at least one of these videos on YouTube.

Furthermore, it was observed that many of these videos featured male person(s) in shisha smoking scenes. This may suggest that those shisha videos were targeted at the male viewers. Also, it can be further suggested that shisha videos are more likely to influence men than women, since they commonly featured men in their scenes. Invariably, this finding also strengthens scientific literatures that reported that men are more likely to smoke shisha than women.²⁹⁻³³

Table 2. Characteristics of the of top 50 short English YouTube shisha videos analysed (date of download: January 19, 2020)

Video Tag	Time Downloaded (Time zone: GMT +1)	Total views	Total likes	Total dislikes	Number years ago it was uploaded	Year of publication	Sex of shisha smoker(s)	Location of shisha smoker(s)	Smoking scene	Warning about hazard(s) of shisha use	Scene where shisha hose mouthpiece was shared
1	2:15pm	52,192,309	501,000	38,000	2	2017	Female	Indoor	Yes	No	No
2	2:17pm	21,061,750	200,000	8,100	2	2017	Male	Indoor	Yes	No	No
3	2:24pm	19,823,901	82,000	3,900	6	2013	Both sexes	Indoor	Yes	No	No
4	2:31pm	2,187,894	15,000	1,200	6	2011	Male	Indoor	Yes	No	No
5	2:32pm	2,095,352	17,000	1,800	3	2017	Male	Outdoor	Yes	Yes	No
6	2:34pm	1,886,046	12,000	1,400	2	2017	Male	Indoor	Yes	Yes	No
7	2:37pm	1,317,544	4,800	767	10	2010	Male	Outdoor	Yes	No	No
8	2:40pm	1,180,928	9,400	637	2	2017	Male	Indoor	Yes	No	No
9	2:42pm	1,119,600	6,500	614	2	2017	Male	Indoor	Yes	Yes	No
10	2:45pm	923,203	1,900	83	11	2008	Male	Outdoor	Yes	No	No
11	2:49pm	919,881	4,200	394	2	2017	Female	Indoor	Yes	No	No
12	2:52pm	916,348	3,700	323	6	2013	Not identifiable	N/A	No	No	N/A
13	2:55pm	724,861	11,000	993	5	2014	Both sex	Indoor	Yes	No	No
14	3:00pm	723,900	1,900	77	9	2010	Male	Indoor	Yes	No	No
15	3:03pm	510,014	885	35	10	2009	Male	Indoor	Yes	No	No
16	3:05pm	385,655	1,800	289	4	2015	Male	Indoor	Yes	No	Yes
17	3:08pm	385,757	2,800	332	2	2017	Male	Indoor	No	No	N/A
18	3:10pm	347,294	1,100	374	6	2013	Male	Indoor	No	No	N/A
19	3:13pm	308,095	1,400	554	0.83	2019	Both sexes	Both	Yes	No	Yes
20	3:16pm	279,339	958	71	6	2013	Male	Indoor	Yes	No	No
21	3:18pm	277,785	316	74	5	2014	Male	N/A	No	No	No
22	3:21pm	276,165	3,300	304	1	2018	Not identifiable	N/A	No	Yes	No
23	3:24pm	263,029	912	66	5	2014	Male	Indoor	Yes	No	No
24	3:27pm	235,223	707	62	4	2015	Male	Outdoor	Yes	No	No
25	3:29pm	226,513	215	69	7	2012	Male	Indoor	Yes	No	No
26	3:32pm	225,499	1,300	58	6	2013	Not identifiable	N/A	No	No	N/A
27	3:36pm	199,830	2,100	206	3	2016	Male	Indoor	Yes	No	No
28	3:43pm	176,728	872	194	3	2016	Male	Indoor	Yes	No	No
29	3:45pm	173,962	244	3	8	2011	Male	Indoor	Yes	No	No

30	3:52pm	165,991	106	33	8	2011	Female	Outdoor	Yes	No	No
31	3:58pm	163,552	1,200	70	2	2017	Male	Indoor	Yes	No	No
32	4:11pm	159,503	624	84	5	2014	Male	N/A	No	Yes	N/A
33	4:13pm	158,609	703	48	5	2014	Both sexes	Indoor	Yes	No	No
34	4:17pm	158,040	504	57	10	2009	Male	Indoor	Yes	No	No
35	4:20pm	148,391	224	233	8	2011	Male	Indoor	Yes	No	Yes
36	4:22pm	148,308	914	82	2	2017	Male	Indoor	Yes	No	No
37	4:25pm	145,875	425	61	5	2014	Male	N/A	No	No	N/A
38	4:27pm	143,704	270	16	10	2009	Male	Indoor	Yes	No	No
39	4:33pm	140,518	340	23	10	2009	Male	Indoor	Yes	No	No
40	4:36pm	138,703	91	49	11	2008	Male	Indoor	Yes	No	No
41	4:40pm	127,016	392	101	6	2013	Male	Indoor	Yes	No	No
42	5:00pm	125,190	143	22	12	2007	Male	Indoor	Yes	No	No
43	5:10pm	110,905	97	30	9	2010	Male	Indoor	No	No	No
44	5:15pm	107,600	133	13	6	2013	Male	Indoor	Yes	No	No
45	5:30pm	103,589	633	42	2	2017	Male	Indoor	Yes	No	No
46	5:38pm	100,514	29	55	12	2007	Male	Outdoor	Yes	No	No
47	5:40pm	91,087	706	32	2	2017	Male	Indoor	Yes	No	No
48	5:43pm	90,003	348	89	3	2017	Not identifiable	Indoor	Yes	No	No
49	5:50pm	87,561	48	19	12	2007	Not identifiable	N/A	No	No	No
50	6:00pm	83,693	457	25	3	2016	Female	Indoor	Yes	No	No
Mean	N/A	1,917,311.7	17,953.9	1,243.3	5.64	N/A	N/A	N/A	N/A	N/A	N/A
SD	N/A	8,001,059.6	75,945.7	5,454.4	3.3	N/A	N/A	N/A	N/A	N/A	N/A

N/A – Not applicable; SD – Standard deviation

Table 3. Quantitative description of the analysed shisha videos

Variables	N (%)
Display of scene where person(s) smokes shisha in the video (n=50)	
Male only	31 (62.0)
Female only	4 (8.0)
Both male and female	4 (8.0)
Face and trunk not shown	1 (2.0)
No person smoking shisha was shown	10 (20.0)
Location of person(s) smoking shisha in the video (n=40)	
Indoors only	33 (82.5)
Outdoors only	6 (15.0)
Both indoors and outdoors	1 (2.5)
Display of persons sharing the mouthpiece of shisha (n=40)	
Yes	3 (7.5)
No	37 (92.5)
Video gave warning(s) about the danger(s) of shisha use (n=50)	
Yes	5 (10.0)
No	45 (90.0)

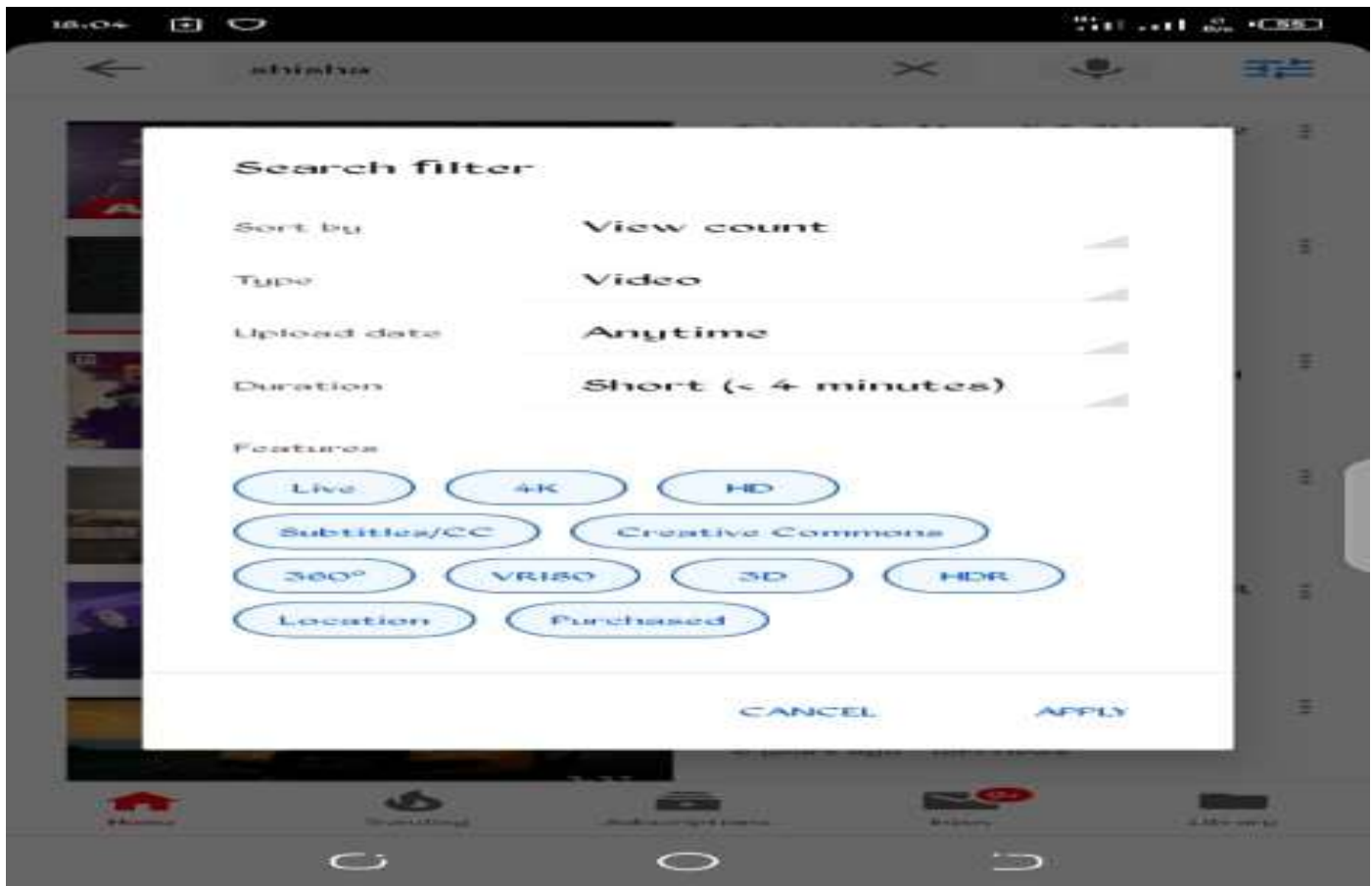


Figure 1. Selected filter command on YouTube App for the video search

We also noted that many of the analysed videos showed scenes where people were smoking shisha indoors. Indoor shisha smoking is more hazardous than outdoor shisha smoking, the reason being that the rate of shisha smoke dilution by natural air will be slower indoors than outdoors, due to limited air circulation and limited air draught. Pertinently, the scenes of indoor smoking in these videos may somehow, directly or indirectly, inform to its viewers that shisha smoking is an indoor activity.

Few of the analysed videos showed scenes where two or more people were sharing the mouth piece of same shisha hose. It had been well documented that shisha mouthpiece sharing is a risk factor for contracting notorious infections like Hepatitis B and tuberculosis.⁸ Hence, viewers of scenes showing such practices may want to emulate such unhealthy practice.

It is also of serious concerns that many of the analysed 50 videos did not relay information about the health hazards associated with shisha smoking; rather they educated

people on how to make shisha and/or smoke shisha. This shows the need for public health stakeholders, especially public health orientation agencies, to look into how the public can be properly educated through the media about the health hazards associated with shisha use.

Also, the purpose behind the upload of some of the analysed YouTube shisha videos are issues of serious concerns as quite a number of these videos were uploaded with the primary aim of educating the public on how to make or smoke shisha.

We also observed that only very few, amongst the analysed videos, were uploaded with the aim of educating the public about the health risks associated with shisha use. Fortunately, these few videos had a relatively high frequency of views and likes. This suggests that the viewers of such videos appreciated their contents by liking them. Invariably, this shows that the YouTube media is a very useful platform that can be used to educate the public about the health hazards associated with shisha use. Also,

this interesting finding shows that not all videos posted on the YouTube media are misleading.

Importantly, there are some other existing social media platforms, which include Skype, Facebook, WhatsApp, 2go, Twitter, and Instagram. It should therefore be noted that shisha videos are also posted on these aforementioned platforms as well. However, in this study, we only explored the YouTube media due to the limited human and financial resources at the disposal of the authors. Due to the limited resources, only a fraction (n=50) of the shisha videos that are trending on YouTube media were included in this study. We considered this as a limitation to our study. Based on the above, it may be difficult to make unguided generalizations about the contents of shisha videos trending on the social media, as our study was only restricted to YouTube media.

Notwithstanding this limitation, this study is believed to be the first study to evaluate the contents of shisha videos appearing on the social media. Also, this study provides evidence to support other scientific reports on the problem of misinformation of the public on social behaviours that affect healthy living.

However, the authors of this study hereby make these recommendations as regards curbing the spread of public misinformation on shisha:

- i. Health and social orientation organizations need to launch massive health education campaigns on all forms of media platforms, emphasizing on the risks associated with use of shisha
- ii. The government should formulate and implements policies and laws that will discourage the promotion of shisha via all forms of media
- iii. The administrators/managers of all social media should ensure that all health information, and not only shisha videos, posted on their media should be scrutinized before it can be assessed by the lay public.

If the above recommendations are put into place, the lay public will be well-informed about hazards associated with shisha tobacco use and also be shielded from misleading information on shisha.

CONCLUSION

This study shows that there are diverse videos publicizing shisha on the YouTube media; while many videos encourage shisha smoking practice, only few discouraged such practice. There is a need to ensure that the lay public is fed with vital information that encourages, modifies, and develops healthy behaviours regarding shisha smoking and its related health risks.

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CONFLICT OF INTEREST

Authors have no conflict of interest to declare.

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