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Review Article

The Reasons for Using Smokeless Tobacco: A Review

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Abstract

Background: Smokeless tobacco use is a public health problem in some parts of the world. The major objective of this study was to investigate the reasons and factors of consumption.

Methods: A content analysis was conducted on articles for the past thirty years (1989-2019). We reviewed and selected 400 abstracts of original articles from PubMed databases by the search strategy, and reviewed one by one. Among these, 45 abstracts were selected, in which the patterns of use, the reasons for using, and the determinants and predictors were described. Eleven papers were selected based on the results and related to the research objectives. The results of these articles were evaluated precisely word by word and phrase by phrase with content analysis method and inductive approach.

Results: The reasons for the use of smokeless tobacco fell in two main themes: socio-cultural structure; and, beliefs, each contained Sub-themes such as "culture and living conditions", "laws", "family and peer relationships", "beliefs related to psychological" and "beliefs related to physical influences", "beliefs", "The role of harm perceptions ".

Conclusion: There was a difference between beliefs, cultures and social conditions among the people about using of smokeless tobacco and the association of these factors is investigated in future studies. We also suggest for the prevention and control of smokeless tobacco use, cultural norms and beliefs will need to address adequately.

Keywords: Smokeless tobacco; Sociocultural; Beliefs; Culture; Living conditions

Introduction

Smokeless tobacco use as a public health problem in some parts of the world (1) was not just limited to in the Southeast Asia countries (1-4) and it was developed to other Asian (5, 6) African (7, 8) , and even European countries (9-12), and also Australia and America (13-19). There is

smokeless tobacco a variety of Traditional products and manufacturers (20). The popularity of products in international markets used by people in packaging and different flavors, also provide a new commercial market for their producers (21-23). However, smokeless tobacco is harmful and a major carcinogen among users and it is one of the major causes of Chronic Diseases (6, 24-26). However, in other studies, smokeless tobacco was reported to be less risky than smoking (27). The prevalence of smokeless tobacco (17, 22) is a public health problem globally and has reached a warning level (28) in some southeast Asian countries. Although the prevalence of cigarettes is higher than smokeless tobacco in some European countries but there is an increasing trend in the world. Smokeless tobacco use is the leading cause of deaths and increasing the burden of disease in poorer parts of the low-income countries (16, 29, 30). According to previous studies, smokeless tobacco is used in 140 countries around the world. There are 300 million consumers in the world, of which 206 million (68.7%) live in India (31). Moreover, smokeless tobacco use in Iran in Sistan and Baluchistan Province and especially Chabahar city is reported to be between 11% and 45% among adolescents and students (32-36).

Unfortunately, in areas affected by this public health problem, few effective interventions have been taken to reduce it (28). The lack of basic information and deep concept about the causes and factors related to use the leading cause of ineffectiveness interventions about this problem (5, 37). In the most study, researchers are attempting to use similar methods to reduce smoking, as well as to reduce smokeless tobacco use but they did not achieve significant success (1, 11, 12, 22, 23, 38). Given the prevalence of high consumption and the lack of qualified interventions and, we need to design more effective interventions in this field (32, 36, 39, 40).

Undoubtedly, proper interventions to reduce consumption among people will be more effective if designing and planning, supported by qualitative studies. Regarding the information and data available to design interventions over the use using non-smoke tobacco is not sufficient in most parts of the world; we need to conduct qualitative research to provide more basic and deeper information. The purpose of this study was to investigate the causes of smokeless tobacco.

Materials and Methods

The Medical Ethics Committee approved the study procedure of Iran University of Medical Sciences (IR.IUMS.REC.1398.843).

This research is done to investigate the reasons behind smokeless tobacco use throughout the world through a literature review of the articles indexed in PubMed for the past thirty years (1989-2019). The reason for choosing this timeframe was Contemporary product reviews. We selected 268 original articles from PubMed databases by the search strategy, using the keyword "smokeless tobacco [ti]" and also we added a total of 132 articles related by the "similar articles" option in the PubMed database. Besides, 400 abstracts of the papers reviewed one by one. Then, 45 abstracts were selected, in which the patterns of use, the reasons for using, and the determinants and predictors were pointed out. Of these papers, 11 papers were selected based on the results and related to the research objectives (Table 1).

These articles were evaluated precisely word by word and phrase by phrase with content analysis method and inductive approach (41, 42). Finding emerging from the data by the two scholars. Phrases and words with the same concept and the specific topic were identified as the data code, and then, the similar codes were placed in the same categories. For the trustworthiness, the codes, and themes were interpreted by the two scholars and some researchers were asked about themes. Eventually, the same codes were categorized as sub-themes and the ultimate 2 themes were obtained.

Table 1: Summery of the studies included in this study

N	*Article titles*	*Reference Number*	*Target group and sample size*	*Part of the results*
1	Why do Bangladeshi people use smokeless tobacco products?	55	1812 non-smoking adults	Family members' influence was the main factor for initiation. The participants believed that people continued using SLT because of addiction (52%) and as a part of their lifestyle (23%). The majority of participants (77%) did not mention any benefit, but SLT users considered it to be a remedy for toothache (P < .05). Almost all participants mentioned that SLT was harmful and causes heart disease, cancer, and tuberculosis.
2	Factors Influencing the Initiation of Smokeless Tobacco Consumption Among Low Socioeconomic Community in Bangladesh: A Qualitative Investigation	43	33 man and women	Tradition of hospitality, curiosity, offer from an elderly person, and avoiding nausea during pregnancy and at time of quitting smoking were key factors for the initiation of SLT consumption. The results also revealed most people were aware about the danger of SLT consumption but, in practice, consumed frequently.
3	Between Traditions and Health: Beliefs and Perceptions of Health Effects of Smokeless Tobacco Among Selected Users in Nigeria.	7	36 consumers	The findings revealed that the majority of SLT users believed that the practice had the following health benefits, among others: clearing of eyes and nose, aiding in sleep and rest, protecting against colds and nose bleeds and curing headaches. The users believed that SLT helped them 'feel high' or bold when afraid. The SLT users also believed that it protected them from evil spirit(s) and dangerous reptiles. The users believed that SLT had no negative health consequences, and SLT was generally preferred to smoking cigarettes
4	Patterns of Use and Perceptions of Harm of Smokeless Tobacco in Navi Mumbai, India and Dhaka, Bangladesh	20	2083 users and non-users	Among users in Bangladesh, the most commonly reported reason for using their usual product was the belief that it was "less harmful" than other types. Perceptions of harm also differed with respect to a respondent's usual product. Bangladeshi respondents reported more negative attitudes toward smokeless tobacco compared to Indian respondents
5	Psychological predictors of male smokeless tobacco use initiation and cessation: a 16-year longitudinal study	13	219 (age 20 outcome) and 192 (age 28 outcome) adolescents	Peer influence, rebelliousness, and thrill-seeking appear to predict smokeless tobacco initiation strongly among male youth in the United States.
6	A comparative study of perceptions on tobacco in vulnerable populations between India and France	10	163 adults with disabilities	In both samples, the most relevant reasons of tobacco use were daily life circumstances, which were also a major barrier to quitting. None of the participants reported that quitting difficulties could be due to dependence or nicotine addiction. The data also suggested that whilst some participants wanted to stop, they also anticipated quitting would be extremely challenging. In addition, there were a number of cross-cultural differences between Indian and French disadvantaged people: level of information concerning the health risk related to tobacco use and level of demand for support to quit from health professionals were most often cited. Recommendations are made for a specific approach among disadvantaged people. The paper concludes that in order to facilitate cessation, tobacco control interventions need to focus on coping strategies to deal with feelings of distress, withdrawal symptoms, and the circumstances of everyday life experienced by disadvantaged tobacco users
7	Awareness, perceptions and use of snus among young adults from the upper Midwest region of the USA	15	2607 young adults (ages 20–28)	More young adults in the sample than the overall US adult population believed that snus is less harmful than cigarettes. Perceptions of snus are associated with snus use.

8	A systematic review of contextual factors relating to smokeless tobacco use among South Asian users in England	44.	14 studies	Reasons for chewing included the use of these products in times of stress, boredom or simply to relax. Traditional health messages and prior held beliefs may lead them to chew these products because of misconceptions about their health benefits, since very few people were aware of the health risks. Many expressed a desire to quit, however found it difficult to go without ST.
9	A national qualitative study of tobacco use among career firefighters and department health personnel	46	332career firefighters	Firefighters suggested several reasons for the decline in smoking in the fire service including changes in the fire service culture, concerns about the impact of smoking on their ability to perform their job, regulations aimed at reducing smoking in departments, and the costs of smoking. In contrast, they felt that the greater use of SLT was primarily due to increasing restrictions on smoking.
10	Current use of smokeless tobacco among adolescents in the Republic of Congo	8	3034 users and non-users	Having parents or friends smokers was positively associated with using smokeless tobacco
11	Smokeless tobacco uses in Nepal.	60	4072 respondents	SLT users have multiple habits of tobacco chewing, smoking and drinking. Despite SLT products being manufactured in the unorganized sector, they are also largely imported from India. People have easy access to various SLT products. There is a general lack of information on the health hazards of SLT use to the population.

Results

After selecting the last 11 articles, the findings were categorized in the form of the title of the article, the year of publication and the summary of the results (Table 1).
It contains the initial codes, the categories, and the final themes.

Social and Cultural Structure

Life has a range of customs and routines in each society. The social structure encompasses customs, communications of family members and communications between other people. Smoke-free tobacco is used in a social structure for facilitating various communications and interactions in some Southeast Asian countries. The use of smokeless tobacco has continued as a cultural tradition (17, 22, 43-45), and on the other hand, in some European and American countries, it has been used as a less-harmful substitute for cigarettes (20, 46-48). In contrast, in California, of the 2,995 people who smoked daily, 75.6% said they had no interest in replacing cigarette smoke with smoke-free tobacco (49). On the other hand, some African countries do not consider the use of smoke-free tobacco to be harmful (7).
The report on the use of non-smoked tobacco in sports halls (10) and sometimes by athletes reflects the formation of new social structures about the use of non-smoked tobacco (50). In some cases, consuming smoke-free tobacco has also been reported in the workplace (46). A wide range of interests and patterns in the world has been reported in this field (16, 20, 50-52).

Culture and Living Environment

Some studies have seriously pointed out that smokeless tobacco use is high in poorer areas (10, 20, 29, 53). In some societies, there are other concurrent habits of use along with drinking alcohol and use of other substances, undoubtedly considered as unhealthy and negative habits. Traditional beliefs about past customs and sometimes-ethnic beliefs about using smokeless tobacco can be a form of social conviction strongly encouraging people to continue consumption. Cultural beliefs are also transferable among generations, easily deduced by observing a behavior (2, 3, 7, 10, 17, 20, 29, 44, 45, 53).

The Rules

Although the harmfulness of smoke-free tobacco has been proven by researchers, there is still no law in many countries to restrict its use. The number of countries have passed laws on banning or restricting smoke-free tobacco are few. Approximately 16 countries from 180 studied countries, agreeing with the WHO Framework Convention on Tobacco Control and have passed laws(22). Some Southeast Asian countries look at smoke-free tobacco production commercially and are looking for new markets in countries such as the United States and European countries for financial returns. Meanwhile, many people around the world may be lured by attractive advertisements, stylish packaging and seductive flavors, due to lack of anti-smoking laws and adequate knowledge of harmfulness. The discussion of the rule of law in the prohibition of consumption has been completely neglected by the majority of governments (11, 14, 21-23, 51, 54). In some cases, the adoption of laws about the use of cigarette smoking has increased the use of smokeless tobacco (46).

Family and Peer Relationships

Many consumers used it by being influenced by other family members use, such as parents, and sometimes peers and friends. For many consumers, the reason for consumption in the social environment is close communication and presence in groups of friends and classmates. They sometimes considered smoke-free tobacco as a norm and usually act in, and most of the time the major cause was the effect of intra-group communication (13). The prevalence of consumption at the age of 10 to 13 yr old and the role of parents and adults as a model for use in adolescents, has been one of the factors of use commencement in adolescents (51, 55).

Beliefs

Beliefs were divided into several categories including beliefs on psychological issues, beliefs related to physical effects and justifiable beliefs. The role of the spectrum of awareness (low or high awareness) was also discussed in this subtheme. Most of these beliefs are wrong and false (20).

Related Beliefs about Psychological Effects

Some consumers have said they feel unafraid and frustrated with smokeless tobacco, with no feelings of fear. Some consumers use it while experiencing anxiety or high level of stress. Others use it to relieve tiredness and impatience. Some also said they were excited and overwhelmed by consumption and considered excitement while using with their friends (7, 44).

Beliefs about Physical Effects

Using smokeless tobacco during tooth pain can relieve pain or reduce toothache, probably based on the personal experience of these people. Moreover, when they have headaches, they also use non-smoked tobacco to treat headaches. Nasal and eye cleansing and prevention of colds were also expressed by consumers as perceptions of physical effects. Others also would consume for better sleep and rest (7, 44, 55).

Justifying Beliefs

There is a belief stating smokeless tobacco is less harmful than other types of tobacco. In other words, justifying that each one having less harm is a more common agent. Some, based on their personal experience, prefer to use one type rather than others and consider it less harmful. Some cases of these beliefs about a particular brand of smoke-free tobacco come to be a more general justifiable belief (8, 10, 15, 56). Besides, it is preferable to cigarette, because this substance is smokeless (7, 15, 20, 21, 47).

The Role of Harm Perceptions

Among smokeless tobacco users, there is a range of harm perceptions (high and low harm perceptions). In some consumers, even though they are fully aware of the harmfulness and risk of smoke-free tobacco, continue to use it. In other words, their high harm perceptions could not stop them from consuming it. On the other hand, some consumers talked about the difficulty of quitting

it. There is a low level of harm perceptions among consumers, and the worst condition is when consumers think that it is useful for them as mentioned in a study in Africa. Tobacco smoking has been caused by low harm perceptions among Indian women at the age of fertility and during pregnancy (43, 47, 55, 57).

Other Reasons

Smokeless tobacco is frequently marketed as less harmful form of tobacco use (at least in the United States and Europe) (27) and thus marketing of tobacco use may be an influential factor in this reason for use. Similarly, marketing of smokeless tobacco has been longitudinally linked to smokeless tobacco use initiation in the United States (58).

Social Cognitive Theory

Given the reasons extracted from the studies, the role of Social Cognitive Theory makes these reasons more relevant. The individual, social, and environmental framework of this theory can be found in the reasons for this study (59). Exploring the reasons for consumption revealed domains of reasons for smokeless tobacco use such as individual (e.g., beliefs), social (e.g., culture; family and peers); and environmental (e.g., laws).

Discussion

The purpose of this study was to investigate the causes and factors of using smokeless tobacco. Two main categories were identified: sociocultural structure and beliefs; each one has subsets and subset codes (Table 2). What have been mentioned in most articles were the living conditions of individuals? In other words, people used smoke-free tobacco for living in a social setting and following its culture and customs. In some cases, these traditions are only specific to a tribe or even a particular group that is ritually held, whose specimens were observed in India (43, 55). According to the categories extracted in this research, the role of the social environment can be mentioned here. In social cognitive theory, to learn certain behaviors, individuals must be present in the social environment or learn from others. According to this theory, learning is done through observation. Young people were using for a variety of reasons, such as pressure from peers and the role model of parents.

In some countries, there is no restrictive legislation on smokeless tobacco, and regrettably, a few numbers of countries have passed limiting or restrictive laws on using this substance. Regarding the illness caused by the use of smoke-free tobacco, we need to take a serious effort for legislation in the field of health. Since its use is growing in family and friendly relationships, we need school and university education about the dangers and the complications. The use of this substance with different flavors, popularity of some brands among youth as well as attractive promotions from manufacturers and fashionable and attractive packages, had led to increasing numbers of consumers (8, 11, 21, 47, 48).

We need qualitative studies to examine the formation of relevant beliefs about the effects of psychology such as bravery and lack of fear and increasing self-esteem as expressed by some consumers (51) as well as beliefs about physical effects such as treatment of headaches, toothache, preventing common cold, improving comfortable sleep, relaxation, eye, and nose cleansing, and eliminating bad breath (mal-smell) problems. If we cannot identify how such beliefs are shaped, we will not be able to reduce the consumption of them. According to social cognitive theory, beliefs are the best indicators for enabling people to make better decisions in their lives. Beliefs are often described as the individual convictions or ideas one holds. Undoubtedly, these negative beliefs will be an important barrier to future health interventions. Concerning the justifiable beliefs, some use only some types of smoke-free tobacco that they consider to be less dangerous (8, 15, 20), and some considered it to be less harmful than cigarette smoking (15). However, none of these beliefs has a scientific basis (24). The role of awareness was also one of the issues that some consumers acknowledged they continued to use it despite being aware of the cost of using non-smoked tobacco, and even some people thought it difficult to leave this behavior (44, 60).

Table 2: Codes, sub themes and themes about the reasons of using smokeless tobacco in the world

Themes	*Sub themes*	*Codes*			
Social and cultural structure	Culture and living environment	Cultural beliefs	Former traditional and ethnic beliefs	Habits of consumption along with drinking alcohol	The experience of deprived and poor consumers
	Rules	Increased smoking restrictions have led to an increase in smokeless tobacco use	The lack of restrictive rules		
	Family and Peer Relationships	Family	peers	Consuming by parents and friends	
	Related Beliefs on Psychological Effects	Induction of no feeling fear and not afraid	Preventing stress from fatigue and boredom	Rebellious and exciting	
Beliefs					
	Beliefs about physical effects	Experience (personal) reducing dental pain	Health benefits (sleep-rest-nasal and eye hygiene, cold prevention and headache treatments)		
	Justifying beliefs	Believing that a smokeless tobacco is less harmful than cigarettes	damages are less common than other types		
	The Role of harm perceptions	Knowledge of the harmfulness and cause of other diseases and its continued use	Awareness of the dangers of consumption In consumers	The difficulty of quitting despite increasing harm perceptions	harm perceptions deficiency

In some cases, the users also knew little about its side effects, but some cases were aware and considered it harmful while others regard it useful. These factors indicate that social contexts and patterns of consumption are different in each society, and these factors must be considered together with social determinants in the adoption of control policies and interventional prevention programs (5, 10, 11, 25, 38, 53, 57). We need new missions and policies in this field (11, 22, 37, 52). The themes of individual, social and environmental in this research are completely consistent with social cognitive theory and have reminded the three important aspects of this theory. The study has gone some way towards enhancing our understanding of the causes and factors of using smokeless tobacco among consumers.

Limitations of the Study

We can mention the lack of data from databases such as Web of Science, Google Scholar, Med line, and other databases such as National Databases and non-English languages. We need a more comprehensive study that includes all the data from the databases above. Besides, more qualitative research would be done on smokeless tobacco to help to reduce or to stop tobacco use. We suggest that the barriers to cessation and reducing consumption of smokeless tobacco should also be investigated.

Conclusion

The reasons for the use of smokeless tobacco were two main categories including socio-cultural

structure and beliefs, each contained categories such as culture and living conditions, laws, family and peer relationships, beliefs related to psychological and physical influences, beliefs, the justification and role of consciousness. There was a difference between beliefs, cultures and social conditions among the people about using smokeless tobacco and the association of these factors is investigated in future studies. We also suggest for the prevention and control of smokeless tobacco use, cultural norms and beliefs will need to address adequately.

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Conflict of interest

The authors declare that there is no conflict of interests.

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