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TOBACCO USE BY FRIENDS AND FAMILY MEMBERS OF TOBACCO USERS: RESULT FROM CLIENTS ATTENDING TOBACCO CESSATION CLINIC AT URBAN PRIMARY HEALTHCARE SET UP IN MALDIVES

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Abstract: **Objective:** This study aimed to identify tobacco use among family members and friends of tobacco user who attended tobacco cessation clinic at an Urban Primary Healthcare set up in Male', Maldives, starting from 2017 through 2023.

Methods: A retrospective, quantitative, descriptive survey was employed utilizing secondary data extracted from tobacco cessation assessment forms at the Urban Primary Healthcare set up's tobacco cessation clinic. The study utilized a census sampling approach, encompassing all available tobacco cessation forms, resulting in a total sample size of 544 participants. The primary researcher developed a data transfer sheet based on a review of the assessment forms, facilitating the systematic transfer of required data. Descriptive statistical analyses were conducted using SPSS version 21.0 to summarize and interpret the collected data.

Results: Out of 544 tobacco users, 494 (90.8%) were male and 50 (9.2%) were female. Majority of the tobacco users reported that their friends and family members use tobacco. Huge amount of tobacco users reported tobacco use by nuclear family members while less than a quarter reported tobacco use among extended family members. Majority of tobacco users reported their coworkers or someone who lives together are non-tobacco users and majority of their class mates or best friends are tobacco users.

Conclusion: The study concluded that majority of tobacco users reported about tobacco use among family members and friends This could be influencing factor for the tobacco users to continue tobacco use as tobacco use among parents or family member and friends has negative effects on tobacco users.

Keywords— Tobacco use, Tobacco cessation, Dhamanaveshi, Tobacco cessation clinic, tobacco use by

friends, tobacco use by family members. Maldives cessation service, Tobacco cessation in Maldives.

I. INTRODUCTION

Tobacco use is a leading cause of preventable deaths worldwide. Tobacco use kills half of its users (WHO, 2022)¹ and it is a risk factor for six out of eight leading causes of deaths globally (WHO, 2022)¹. Tobacco use is a growing epidemic in most of the low to middle-income countries (NCD Alliance, 2022)².

Social influence from family and friends is linked to habit of smoking and development of nicotine dependence (Okoli et al., 2009, Tyas & Pederson, 1998, De Vries et al., 2006 & Lerman & Berrettini, 2003)^{3,4,5,6}. Likelihood of experiment in smoking by children is higher if they are exposed smoking at home (Farkas, 2000 & Barman et al., 2004)^{7,8}. Parental tobacco uses dispose children more positively to tobacco use (Wilkinson et al., 2008)⁹. Smoking by siblings also increase risk of regular smoking (Sasco et al., 2003)¹⁰. Similar smoking patterns among family members can be partly explained through shared genes (Vink et al., 2003)¹¹.

A variety of theories have been proposed regarding the association of social influence and smoking behavior. Group-level theories examine how differences in gender, race and subculture influence the relationships and thus smoking behavior (Hoffman et al., 2006)¹².

Multiple literatures shows that tobacco use by family members and friends as a reason for initiation of smoking. Nimr et al (2020)¹³ discovered friends followed by family members as most common reason to initiate smoking among smokers in Kingdom of Saudi Arabia.

There is also evidence that the increased risk of continuing smoking caused by a smoking peer is comparable to that caused by smoking parents (De Vries et al., 2003)⁵. An American study reported a male best friend who smokes seems to have a greater effect on smoking initiation than a female best friend who smokes (Distefan et al., 1998)¹⁴.



Tobacco uses by family members and friends of tobacco users were reported widely in previous literatures. Guzel (2022)¹⁵ reported nearly 40% of family member smokes while Joshi et al (2010)¹⁶ discovered that less than half of quitters have another family member who consume tobacco in any form. A study conducted in Saudia Arabia revealed that 55.1% of students said that they had male smokers in the family and only 19.4% reported they had female smokers in the family (AlQahthani, 2017)¹⁷. A study conducted by Subedi et al (2021)¹⁸ in Nepal, showed that approximately 44% of tobacco users had one or more family members who use tobacco.

More than half (52.5%) of study subjects reported smoking in the family by a study conducted in Turkey (Ergin et al., 2016)¹⁹. Ergin et al (2016)¹⁹ also discovered that 25.9% of mothers currently smoke and that of father is 11.1% and nearly 20.3% of siblings smoke. Furthermore, Ergin et al (2016)¹⁹ also demonstrated that 25% of mothers sometime smoke while that of father is 40 % and siblings is 20%.

Tobacco usage in Maldives

Tobacco use is relatively high in Maldives. STEP survey (2011)²⁰ conducted in Maldives, showed that 34.7% of men and 3.4% of women were tobacco users. However, these numbers have increased to 35.6% for men and 7.6% for women in the STEP survey of 2020-2021 (Raheem & Moosa, 2022)²¹. These values vary and prevalence also varies following geography and age group.

The highest prevalence of current daily smokers among men (37.6%) was in the age group 25–34 years. Among women, daily smokers were higher in the older age group of 55–64 years (9.2%) (WHO, 2013)²². However, the recent STEP survey (2020-2021)²¹ showed the highest prevalence of current smokers was in the age group 30-44 years with the percentage of 29%, followed by the age group 45-69years with a percentage of 23.4% (Raheem & Moosa, 2022)²¹.

STEP survey (2020-2021)²¹ also showed 33.9% people expose to second hand smoke at home while that of work place is 10.4%. This denotes that every 3 persons out 10 people are exposed to tobacco smoke at home, while one every 10 people is exposed to tobacco smoke at workplace. Usually, people expose to second hand smoke at home when family members smoke, while people expose to second hand smoke when friends such as coworkers consume tobacco.

Tobacco use among friends and family members of tobacco users attended to tobacco cessation clinic at selected PHC setup was not examined previously Thus, this study was aimed to identify tobacco use among family members and friends of tobacco user who attended to the tobacco cessation clinic at the selected Urban Primary Healthcare set up in Male', Maldives, starting from 2017 through 2023.

II. AIMS AND OBJECTIVES

Aims

The study is aimed to identify tobacco use among family members and friends of tobacco user who attended tobacco cessation clinic at an Urban Primary Healthcare set up in Male', Maldives, starting from 2017 through 2023.

This is an article produced from a research project conducted by the primary researcher using secondary data of a tobacco cessation clinic as retrospective study. The aim of the actual research project was to identify the characteristics of tobacco users such as, (1) demographic characteristics, (2) practice of tobacco uses, (3) history of previous quit attempts (4) nicotine dependence (5) status of follow ups (6) status of quit and relapse among tobacco users who attended tobacco cessation clinic at one of the Urban Primary Healthcare Center (Dhamanaveshi) in Male' Maldives, from 2017 to the end of 2023. Moreover, the actual project also analyzed (7) variation in nicotine dependence amongst tobacco users. Furthermore, additional objectives were made for research purpose such as identifying tobacco use among family members and friends of the tobacco users who attended the tobacco cessation clinic.

However, this paper is mainly focused an objective which was out of the scope of actual research project although the required data were collected through assessment forms and analyzed during data analysis phase. Previously, three articles were published assessing various objectives from actual research project. One article was based on first 3 objectives of actual research project and published by A. A. Hameed (2024a)²³ in peer reviewed journal titled "Characteristics of tobacco users who visited the tobacco cessation clinic in an urban primary healthcare center in Male' Maldives from 2017 - 2023: A retrospective, descriptive cross - sectional study". Another article was published in peer reviewed journal by A. A. Hameed (2024b)²⁴ which was focused on objective 4th and 7th of actual research projected titled as "Nicotine dependence and its variation among tobacco users who visited the tobacco cessation clinic in an Urban Primary Healthcare Center in Male' Maldives". Furthermore, the third article was published in a peer reviewed journal by A.A. Hameed (2024c)²⁵ which was focused on 5th and 6th objectives of actual research project titled as "Follow Up Status and Characteristics of Tobacco Users in an Urban Primary Healthcare Setup in Male, Maldives".

Objectives

1. To tobacco use among family member of tobacco users who attended the selected tobacco cessation clinic.
2. To tobacco use among friends of tobacco users who attended the selected tobacco cessation clinic.

III. METHODS

This study was conducted in Maldives using secondary data of a tobacco cessation clinic at one of the urban primary healthcare set up in Greater Male' Area. Approach used was

quantitative, retrospective cross-sectional survey. The data were collected during past 7 years period from 2017 till the end of 2023. During this selected 7 years' time, a total of 693 tobacco user have visited the clinic to get professional help for quitting tobacco. Yet, only 544 study subjects were considered excluding cases with repeated assessment forms or misplaced assessment forms or inaccessible forms during data collection phase.

This study utilized total sampling method thus entire target population 544 tobacco users who attended the selected tobacco cessation clinic during study time period was included in the analysis. This indicates that the sample size used in the study corresponds exactly to the total number of clients targeted for inclusion.

A data transfer sheet was developed by primary researcher as an instrument after reviewing the tobacco cessation assessment form, which comprises of 5 sections starting with (1) demographic characteristics followed by (2) practices of tobacco users, (3) history of tobacco cessation among tobacco users, (4) nicotine dependency and (5) follow up status of tobacco users, usage of nicotine replacement therapy and methods used to quit by tobacco users. The data was then transferred from tobacco cessation assessment form to the data transfer sheet by primary researcher. However, additional objectives were made to produce this article aimed at identifying tobacco usage among family members and friends of the tobacco users who visited tobacco cessation clinic at urban primary healthcare set up in Male' Maldives as this data was collected outside scope of the actual research project.

Prior to data collection, no objection letter was obtained from urban primary health care center (Dhamanaveshi) and ethical approval was received from National Health Research Council

(NHRC) at the Ministry of Health, Maldives. The NHRC approval number for actual research project is NHRC/2023/18. Data was analyzed by utilizing SPSS software version 21.0. Simple descriptive statistics such as mean, median, mode, frequency and percentages were used. .

IV. RESULT

Sociodemographic characteristics

The present research reported 39.6 years is mean age for tobacco users who attended tobacco cessation clinic at urban health care set up in Male', Maldives and 18 to 80 years was the age range of the study subjects. Less than half (49.1%) of the tobacco users who attended the tobacco cessation clinic belonged to the age group 36- 64 years. A large number (90.8%) of tobacco users were male and nearly two-third (59.0%) were married. Approximately 34.2% of tobacco users had no children at the time of data collection or assessment completion. Most (83.6%) of the tobacco users were employed either by themselves, government or private.

Tobacco use among friends and family members of tobacco users

According to present study 85.1% (n=463) study subjects said that their family member use tobacco, while 96.9% (n=527) reported that their friends use tobacco. Those who reported about their family member usage 70.2% (n=382) reported tobacco use by nuclear family member, while 26.3% (n= 143) reported tobacco use by their extended family member (Table 01).

Table 01: Tobacco uses among family members and friends

Variable	N	%
Tobacco uses by family member		
Yes	463	85.1%
No	79	14.5%
Tobacco uses by nuclear family member		
Yes	382	70.2%
No	160	29.4%
Tobacco uses by Extended family member		
Yes	59	10.8%
No	143	26.3%
Tobacco uses by Friends		
Yes	527	96.9%
No	15	2.8%
Tobacco uses by Friends - Co-worker		
Yes	100	18.4%
No	442	81.3%
Tobacco uses by Friends – Classmate or BF		
Yes	514	94.5%
No	28	5.1%
Tobacco uses by Friends – someone living together		
Yes	49	9.0%
No	493	90.6%

The findings showed that majority (96.9%) of friends of the tobacco users use tobacco. Regarding tobacco use by friends 94.5% (n=514) reported about their best friend or classmate's usage of tobacco, 18.4% (n=100) reported tobacco use by their coworker and 9.0% (n=49) reported about tobacco use by

someone living together. This means that 81.3%(n=442) of tobacco users reported that their coworker does not smoke, 90.6% (n=493) reported someone living together does not consumed tobacco (figure 01).

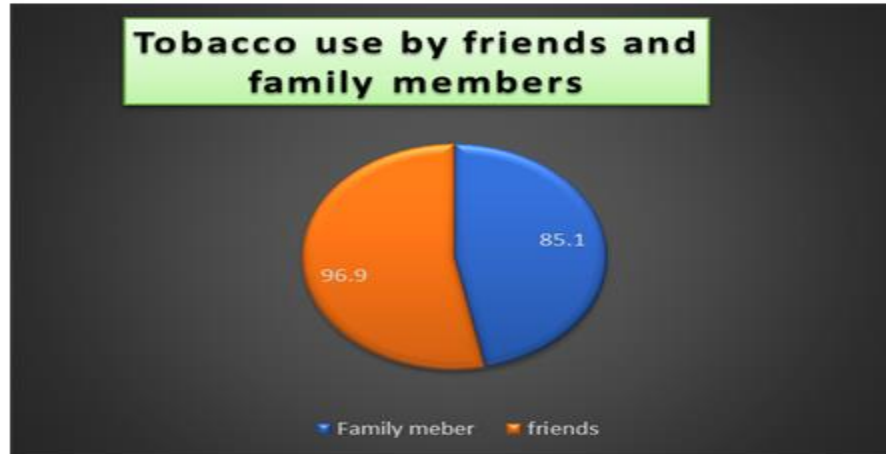


Figure 01: tobacco use by friends and family members

V. DISCUSSION

According to the present study, majority (85.1%) of the tobacco users informed that their family members used tobacco. This is in accordance with some previous studies such as a study performed by Catherine et al (2021)²⁶ who reported 69% of study subjects had family members who consume cigarettes, a study conducted by Dhahsan et al (2023)²⁷ who reported that more than half (52%) of respondents have at least one smoker at home, while more than one quarter (26%) of participants have two smokers at home. Furthermore, Subedi et al (2021)¹⁸ stated tobacco use by family members in less than half (45%) of tobacco users. The existing study discovered around 70% of tobacco users had nuclear family member who use tobacco and slightly higher than a quarter (26%) of tobacco users had extended family members who use tobacco. This is in consistent with findings both Sharma et al (2020)²⁸ and (Divinakumar et al (2017)²⁹ whom reported tobacco use among fathers with 56% and 41% respectively for Sharma et al (2020)²⁸ and Divinakumar et al (2017)²⁹. Moreover, Divinakumar et al (2017)²⁹ also reported 75% of tobacco users had siblings with a history of tobacco use, 23.1% of tobacco users had children with a history of tobacco use. In addition, Alhussain et al (2021)³⁰ reported 74 % of smokers have other family members who smoke. Similarly, Nimr et al (2020)¹³ reported 67.4% of smokers had other family members who smoke at home. The present study reported 96.9% of tobacco users have friends who use tobacco. This is in line with findings by Guzel (2022)¹⁵ who demonstrated that 76% of smokers have friends who smoke and their smoking initiation was influenced by their friends who smoke. Similarly, A study conducted in

Ahmed Aabaad, India, showed 56% of study subjects had some friends who smoke or chew tobacco, 22% had most or all friends who chew tobacco or smoke (Shet et al., 2019)³¹. The finding of this study is also corroborated by more recent study by Saari et al (2024)³² as the research findings reported smoking of a current close friend was strongly associated with participants' own smoking. The smoking of a close friend during schooldays was similarly associated (Saari et al., 2014)³². Smoking among men was associated with the smoking behavior of mothers and siblings while that among females was not (Saari et al., 2014)³².

VI. LIMITATION

The data analyzed in this study is the secondary data collected retrospectively in the past seven-year period from the clients who attended tobacco cessation clinic at urban primary healthcare set up from 2017 to the end of 2023, thus data collected later or prior to the given period of time was not interpreted in this study. This indicates that the data cannot be generalized to the general public or across the greater Male' area or across the nation as the data is limited to only one tobacco cessation clinic in the greater Male' Area. This study analyzed the data of the tobacco cessation clinic at an urban primary healthcare set up, and no data from any other tobacco cessation clinic established in Greater Male Area (GMA) were assessed, thus future studies are required to explore stated objectives using data of other clinics and to do a comparable study. The sample used in this study is the total population sampling which is a subtype of non-probability purposive sampling, thus the finding cannot be generalized across tobacco



cessation clinics in GMA or nationwide. Furthermore, the possibility of information bias and recall bias may rise while reporting the tobacco use among family members and friends.

VII. CONCLUSION

The study concluded that majority of family members and friends of the tobacco users who attended the tobacco cessation clinic at the selected urban primary healthcare set up use tobacco. Large number of nuclear family members of tobacco user consumed tobacco. This concurs with previous literatures which shows positive family history of tobacco use reported by tobacco users. Similarly, it aligns the fact that influence of friends and family members who use tobacco on tobacco users which emphasizes tobacco user on keep consuming tobacco.

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