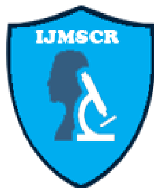

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A Cross-Sectional Epidemiological Study To Know Socio-Demographic Profile And Prevalence Of Tobacco Consumption Among Adolescent In An Urban-Slum Area In A Metro-Politan City

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Abstract

Tobacco is the most important preventable cause of death and disease among adults. According to estimates made by the WHO, currently about 5 million people die prematurely every year in the world due to the use of tobacco, mostly cigarette smoking[1] . More important is the fact that this epidemic of disease and death caused by tobacco is increasing very rapidly. By 2030 it is expected to kill more than 9 million people per year; half aged 35-69.[1]The epidemic is increasingly affecting developing countries, where most of the world's smokers (84% or 1 billion) live. Close to half of all men in low-income countries smoke daily and this has been increasing.[2] Many deaths and much disease could be prevented by reducing smoking prevalence. Tobacco kills a third to a half of all those who use it. On an average, every user of tobacco loses 15 years of life. Total tobacco attributable deaths from Ischemic Heart Disease, Cerebro vascular Disease (Stroke), Chronic Obstructive Pulmonary Disease and other diseases are projected to rise from 5.4 million in 2004 to 8.3 million in 2030, almost 10% of all deaths worldwide..

Methodology:

This was a community based cross sectional study carried out in the urban area of Mumbai for a period of one year among 1888 adolescents aged 11 to 19 years as per WHO adolescent age criteria. The data was collected using a pretested structured questionnaire. All data was collected was entered and analysis was done by using the Microsoft office Excel and necessary statistical tests like proportions and Chi square tests were applied.

Results:

In present study (56.1%) of the study populations were males. Majority of the participants (64.5%) were Muslim by religion. Most of them were socioeconomic class III (23.5%) and CLASS IV (35.2%). Most of the participants (96.4%) got pocket money, of them majority (71%) were getting Rs20 to Rs50. The prevalence of tobacco consumed in our study among adolescent was found to be 23.5% in present study. The present study also states that 7.8% had tried both forms of tobacco while 10.8% and 4.9% had tried smokeless and smoking form of tobacco respectively. 7.3% of participants were involved in other addictions (such as alcohol consumption).

Conclusion:

We conclude that there is a 23.5% prevalence of tobacco consumption among adolescents. This is the age when they try to take risks and get into addiction very easily due to pteer pressure and due to the careless behavior. It is nation's responsibility

Keywords: Adolescents, tobacco consumption, urban slum

Introduction

Tobacco use is one of the chief preventable causes of death in the world. Tobacco attributed to about 100 million deaths in 20th century. At present tobacco use causes3.524 million deaths every year which is expected to increase to 10 million by 2020"s and 80% of these cases will be in developing countries. Studies in developed countries show that most people begin using tobacco before the age of 18 years, if this pattern continues; tobacco use will result in death of 250 million of people who are children and adolescents and many of them in the developing countries. [1]As per global adult tobacco survey India 2010 there were 274.9 million adult tobacco users in India 163.7 million of these used forms of tobacco.[1]Tobacco use in India is more varied than in most countries, 40% of the tobacco consumed in India is in tobacco consumption like Gutkha, pan masala, bidi and ciggerette etc. The last few decades have seen a phenomenal growth in the tobacco industries. The use of various tobacco is an unfortunate past time of billions of people across all section of the society. [3]In the last three decades there has been a major change in the use of tobacco in India, while there is noted decline amongst traditional users, the older males, there is a phenomenal increase amongst adolescent and young adult of the country.[5]State of Maharashtra has enacted a five year ban, the longest permitted by law, on the production, sale, transport and possession of tobacco products, which was effective from 20 July 2012. [9]Still all forms of tobacco products continue to be available easily in a portable sachets and packets, at cheaper rate, cost being approximately that of candy; in such scenario many non addicts and youths develop addiction to these tobacco products. Shockingly, younger and younger children are being introduced into this habit. [10]Manufacturers have also found ways of bypassing advertising restrictions. They take full advantage of the electronic and social media and market the product by advertising a fake non tobacco containing product having the same name and similarly packed packets also known as surrogate advertisement. [10]Now, the risk being by new dangers that globalization has brought: unopposed marketing through satellite television and internet shopping and unprecedented opportunities for smuggling. Adolescents are easily influenced by media messages. Pocket money given to adolescents is replacing tiffin in recess , allowing them to spend on buying things other than eatables especially influenced by media message. Pockets money given to adolescents is replacing tiffin in recess, allowing them to spend on buying things other than eatables especially the attractive packets of tobacco products by their parents, unlike smoking cigarettes which remains a taboo stigmatized by peers and frowned on by parents.[5] Tobacco has always been acceptable in India. Whole families generally unaware of the dangers and will share these products at the end of a small meal regarding it as a little more than a mouth fresheners, most of the people consuming tobacco products continue to do so due to the misconception that is it good for dental hygiene and also improves digestion and also consider it beneficial for proper bowel emptying.[6]

Cancer is one of the ten most common cancers in the world. Approximately 90% of Indian cancer is tobacco related. The possibility of developing the lesion being ten times higher if the habit is formed below age of 14 years.[6] The first signs are appearance of patches in mouth, difficulty in mouth opening. At this stage the signs can be reversible but if left untreated will possibly develop into a cancer.[7] It is typically during adolescent age that decisions are made as to whether or not to go for tobacco. Education of harmful effects of tobacco usage can therefore play an important role in reducing the incidence of tobacco consumption and harmful effects that may result from its use. A concentrated effort at targeting the adolescent population may help in preventing the problems in years to come. This study was therefore conducted in adolescent population, whereby an attempt was made to study the prevalence of tobacco (smoking and smokeless) consumption.[6]

Aims And Objectives:

1: To study the socio-demographic profile among the adolescents of an urban slum area

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2: To study the prevalence of tobacco consumption among the adolescents of an urban slum are

Material And Methodology

Study Design:

A community based cross sectional observational study.

Study Area:

Urban slum situated in field practice area, attached to urban health centre of medical college.

Study Period: December 2017 to December 2018

Study population: Study population comprising adolescent age group of 10 to19 years of age (as per WHO Adolescent age was same for both Boys and Girls). [1]

Subject Eligibility: Inclusion Criteria:

1. Adolescent male and female
2. Residing in that region or zone for at least one year
3. Assent to participate in study
4. Consent from their guardian Exclusion criteria:
5. Mentally retarded.
6. Those who were not willing for the study.

Sample Size Calculation:

As per the census record (2011 India); 19.6% populations were contributed by adolescent group of 10-19 years of age.[2]

As per ward office data, total population in study area were 74081, hence expected adolescents population were 14520. Study area consisted of 13570 household The prevalence of tobacco consumption in adolescent's population was found to be 17.5% [Reference taken from R.N.COOPER HOSPITAL (a Study conducted in urban area of Mumbai)] (R.N. COOPER HOSPITAL published in The Indian Express written by Zeeshan Shaikh (Mumbai) updated: June 7, 2016). [16].

Sample size calculated by using formula

n = 4PQ/L x L

(P= prevalence of tobacco consumption in adolescent population was 17.5)

Then Q=100-P =100-17.5= 82.5

L= allowable error (10% of P)

L=10/100x17.5 =1.75

n= 4x17.5x82.5/2.6x2.6= 1887.25)

Sample Size (N) = 1888 (Round Off)

Sampling interval = total no of households / sample size

sampling interval =13570/1888= **7**

There were 13570 households in this study area

Sampling methodology:

The first household was selected by lottery method (random sampling) Then every subsequent 7th household were included in sample. In case that house did not have adolescent/household locked for three consecutive visits then the immediate next household was chosen.If the participant fulfilled the inclusion criteria for the study then the patient Information sheet were explained to the participant and also informed Consent taken from the parents. For minors (below 18) informed Assent form were taken from the participant. Using pretested validated proforma as a data collection tool, the information was collected by face to face/interview. Maintaining due privacy, all information were collected ensuring the respondent`s comfort.The questionnaire was administered by student.

Results:

Table 1: Socio demographic profile of participants:(N=1888)

Sr.no.	Variables	Answers	Frequency	%
1		10 to 13	700	37.1

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	Age group	13 to 16	709	37.5
		16 to 19	479	25.4
2	Gender	Male	1059	56.1
		Female	829	43.9
3	Religion	Hindu	670	35.5
		Muslim	1218	64.5
4	Employment	Students	1536	81.4
		Others	352	18.6
5	Types of Family	Nuclear	1205	63.8
		Joint	683	36.2
6	Socioeconomic class	Class I	121	6.4
		Class II	223	11.8
		Class III	451	23.9
		Class IV	665	35.2
		Class V	428	22.7

In present study enrolling 1888 adolescents, aged 10 to 19 years, majority were belong to 13 to 16 years of age group. 1059(56.1%) were males and 829(43.9%) were females.

Majorities of the participants were muslims 1218(64.5%) followed by hindu which were 670(35.5%). Maximum 1536(81.4%) of participants were students. It was also found that 1205(63.8%) of participants belong to nuclear families. Acoording to modified B.G.Prasad classification for socioeconomic status, roughly 59.1% of participants belonged to class III and IV.

Table 2: Educational and Occupational status of parents of Enrolled participants: (N=1888)

Sr.no	Variables	Answers	Frequency	%
1	Father's occupation	Skilled	1599	84.7
		Unskilled	289	15.3
2	Mother's occupation	Housewife	1645	87.1
		Others	243	12.9
3	Father's education	Illiterate	312	16.5
		Primary	600	31.8
		Secondary	436	23.1
		Higher secondary	383	20.3
		Graduate	157	8.3

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4	Mother's education	Illiterate	364	19.3
		Primary	772	40.9
		Secondary	461	24.4
		Higher secondary	291	15.4

1599(84.7%) of the fathers were skilled worker (zari-worker,Electricians,Drivers etc) and majority of mothers were housewives 1645(87.1%).312(16.5%) and 364(19.3%) of fathers and mothers were illiterate respectively.

Table 3: Participant's access to pocket money

Sr.no.	Do you get pocket money?	Frequency	%
1	Yes	1820	96.4
2	No	68	3.6

The above table revealed that, 1820 (96.4%) participants got pocket money. Table 4: Source and Expenditure of pocket money.

Sr.no.	Variables	Answers	Frequency	%
1	Who gives you pocket money?	Mother	1491	79.78
		Father	387	20.22
2	Do you save that pocket money?	Yes	521	27.57
		No	1367	72.43
3	Do you spend that money on tobacco products?	Yes	420	22.25
		No	1468	77.75
4	How much pocket money do you get? (indian rupees)	0	68	3.6
		10	140	7.41
		>20	831	44
		>50	509	26.97
		>100	340	18.02

The above revealed that 1491(79%) participants got pocket money from their mothers. Out of 1888 participants, 521(27.57%) of participants saved their pocket money and 420(22.25%) of participants spent their money on buying tobacco products. 831(44%) number of the participants were getting more than 20rupees per day as a pocket.

Table 5: consumption of tobacco products among the enrolled participants:

Sr.no.	Variables	Answers	Frequency	%
1.	Have you ever consume tobacco?	Yes	444	23.5
		No	1444	76.5
		Never tried	1444	76.5

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2.	Have you ever tried cigarette/bidi/gutka/paan masala/other means of tobacco products?	Tried both form of tobacco	147	7.8
		Tried only smokeless form of tobacco	204	10.8
		Tried only smoking form of tobacco	93	4.9
3.		Yes	139	31.5(of
	Do you have any other addictions?			111)
		No	305	68.4(of 111)
4.	During the past 30 days ,how many days did you try cigarette/bidi/gutka/paan masala/other means of tobacco products?	0 days	1444	76.5
		Less then 30 days	92	4.8
		More then 30 days	352	18.6

The above mentioned table revealed the prevalence of tobacco consumption by the adolescents. (444)23.5% had tried. 147 (7.8%) tried both forms of tobacco while 204(10.8%) and 93 (4.9%) tried smokeless and smoking forms of tobacco respectively.

139 (31.5% of 111) participants were involved in other addictions apart from tobacco consumption.352 (18.6%) participants were consuming tobacco for more then 30 days while 1444 (76.5%) never tried.

Discussion

The present Community based study was conducted in an urban slum in a metropolitan city, which is the field practice area of Department of Community Medicine of Parent Medical College. It was conducted during December 2017 to December 2018.The study was aimed to study the prevalence and determinants of tobacco consumption practices among adolescent in urban area. Total numbers of 1888 study subjects living in the area were interviewed. Findings of the study presented as results in the previous section are discussed in details with appropriate comparisons with findings of other relevant studies.

Socio-demographic profile:

Majority of the subjects were males 1059 out of 1888 participants

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(56.1%).709(37.5) participants belonged to >13 to 16 years of age group. Muslim community was found in majority i.e. 64.5% (1218). It was found that 18.6%(352) of adolescents were employed (Zari worker, labourer and electrician). The reason might be because of lower socio-economic status of family. It was found that 63.8% (1205) of the subjects belonged to nuclear family structure. Only 6.4% (121) participants belonged to class I (as per B.G.Prasad classification).[17]

In another cross sectional study conducted by Alpesh Shankerlal Patel et al, in Gujarat, similar findings were reported in which males were 54.25%. 75.6% of participants were Muslims and most of them were school going and number of participants were of class I of socioeconomic status and most belonged to nuclearfamily.[6] Similar findings were reported by WHO health statistics and Makwana et al. [11] [15]

Educational and Occupational Status of Parents of enrolled Participants:(N=1888) 84.7% were skilled workers(zari workers, electrician, drivers, etc). In case of mother"s employment, most of them were housewives 87.1% (1645). It might be due to religious and cultural inhibitions, depriving them from employment. Pertaining to father's and mother's education 16.5% and 19.3% were illiterate respectively while majority were educated up to primary 31.8% and 40% up to higher secondary. Mostly the poor literacy level being responsible for them getting employed as skilled labourers.

In a study conducted by Alpesh Shankerlal Patel et al on tobacco consumption among adolescents almost similar findings were reported; 8.5% of fathers were illiterate. Most of them were employed as skilled labourers. 74.88% and 23.87% of mothers were housewives and illiterate respectively. [6] Similar studies conducted by Singh v. et al from Jaipur and the ASH fact sheet 2011. It was seen that majority of adolescent's fathers and mothers were skilled worker and housewives respectively. Overall educational status was reasonably good in the parents. [12] [13]

Participant's access to pocket Money and Source and Expenditure of Pocket Money: 3.6% (68 out of 1888) of participants were not getting pocket money. It might be due to parent's financial problem.

79.78% (1491 out of 1888) of pocket money was given by their mothers. 22.25% (420 out of 1888) of participants spent their money on buying tobacco products whereas 27.57% (521) of subjects saved their pocket money. The average pocket money received by the subjects was less than 10 rupees per day. Subjects got financial support for their daily needs in term of pocket money. This cash was not closely supervised and adolescents were free to use it as they wished to.

In another study by V.C.Punita et al showed that 50% of the children received pocket money from the parents.

[14]

This difference in findings between the current study and V.C.Punita et al study may be explained by the large sample size taken for their study.[14]

Conclusion:

"From the cross sectional epidemiological study to know the socio-demographic profile and prevalence of tobacco consumption.among adolescents of urban slum area" it can be concluded that The prevalence of tobacco consumption (smoke and smokeless) in adolescents in the urban slum was 23.5%.

Most of the subjects knew about various forms of tobacco products. A majority of them knew that these products were harmful to the health and may cause illness, cancers and may also lead to death. Very few of the subjects considered that the tobacco products were beneficial and number of users were higher among these subjects. Majority of them got the knowledge of effects of tobacco from electronic media platform while some got it from the newspapers; advertise hoardings, parents etc.

A majority of the subjects had positive attitude towards the ban on sale and consumption of tobacco products.

The age of initiation of these tobacco products was found to be between 13 to 14 years of age, reason for the first time consumption being that it provided enjoyment and few started using it because of peer pressure.

Various socio-demographic factors like increase in age, being male concluded as significant factors for

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increase in number of adolescent tobacco product user.

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