

Influence Of Multimedia Celebrities Based Analysis On Smoking Cohort- A Cross Sectional Survey

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Abstract

BACKGROUND: Smoking acts shown in movies may increase the use of tobacco in people, which is one of leading causes of cancer in India. The objective of the study is in attempt to establish a relationship between smoking and influence of advertisements and influence of on-screen actors and its effect on tobacco usage among people residing in Chennai.

METHODOLOGY: A cross-sectional study was conducted among 162 individuals drawn according to the pilot study conducted. The study was conducted among smokers who are in the locality of Kundrathur area, Chennai. A pre validated questionnaire was taken and data was collected among the smokers. The study was assessed by dividing into low, moderate and high dependence scale of Fagerstorm. Statistical analysis was done using SPSS software, descriptive statistics was used to find the frequency and percentage distribution and chi-square test was used to find the association between the level of smokers and the questionnaire recorded.

RESULTS: The study reveals a positive association between the use of tobacco shown to influence by multimedia. It is clearly seen that the influence of multimedia increases the prevalence of smoking thereby increasing the health effects of the individuals who smoke.

CONCLUSION: Among the people of Chennai, it has been found that movies plays a significant role in increasing the smoking exposure. Further studies have to be carried out to identify how different content and different modes of media affect the population.

Keywords: Smoking, multimedia, Influence.

I. INTRODUCTION

Tobacco was discovered by Columbus in 1492 and Portuguese introduced tobacco to India 400 years ago. India has now become the second largest Tobacco consumer in the world.^{1,2} In the

year 2000, WHO Global report trends 2000-2025 has estimated that tobacco use (smoking and smokeless) is currently responsible for the death of about six million people across the world each year with many of these deaths

occurring prematurely. According to Global Adult Tobacco Survey (GATS) 2016-2017, in India 28.6% (266.8 million) of all adults and 42.4% of all males, 14.2% of all females currently use tobacco (smoke and/or smokeless tobacco). Tamil Nadu contributes for roughly 10.5% of all smoking/smokeless tobacco users in India^{3,4}. With the epidemic of Tobacco shifting from developed to developing countries, it is estimated that by 2030, 10 million people will die from tobacco use per year with India facing an increase in mortality to 13.3% by 2020^{5,6}.

Multimedia plays an important role in marketing the tobacco products among youth. They have both positive and negative effect by both preventing and promoting the use of tobacco products⁷. Multimedia influences the youth in a negative way that they may develop tobacco use behaviour⁸. Tobacco companies reach youth through these multimedia's in various forms. Tobacco companies has a long-standing relationship with the entertaining media includes television, cinema, billboards, radio, press. As multimedia has turned out to be a strong weapon that could control almost every emotion of human this era, taglines, real life incidents and stories in a video graphic form or testimonials straight from the victims suffering from the deadly effects of tobacco, intense images need to be in constant circulation for quitting smoking and other products based on tobacco^{9,10}. The transition from youth to adulthood is a difficult time and youth become vulnerable to various social, physical and environmental influences which leads them to experiment different types of exposures, mainly smoking. According to WHO report on Global epidemic 2013 about one – third of youth is attracted to different tobacco products, either due to advertisements, promotions, movies or under the influence of any popular celebrities enacting in them^{11,12}.

II. MATERIALS AND METHODS

This cross-sectional study was conducted among current and past smokers (review and recall patients) who came for Tobacco Cessation Counselling in the Department of Public health Dentistry, Private Dental College and Hospital, Chennai and partly through the Google Forms

Online Platform. The purpose of the study was explained to the participants and informed consent was obtained from the participants prior to the start of the survey. In the case of hand-to-hand questionnaire, 10 minutes were given after which the survey forms were collected and in the case of the online questionnaire, an automatic 10-minute stopwatch was set. The personal information of the participants were kept confidential and the participants were assured that their biographic data will not be enclosed to anyone. Convenience sampling was the chosen method of sampling. A pilot study was conducted among 30 participants and a pre-tested questionnaire was circulated and responses were collected. Adjustments were made in the question model and in recording the response before launching the full survey. All males and females between the ages of 15 to 35 who are current and past smokers were included and all males and females of ages less than 15 years or older than 35 years were excluded. All persons residing out of Chennai, Tamil Nadu were excluded. Totally 162 samples were selected from the pilot study conducted before the start of the main study. The questionnaire consisted of 12 questions was divided into three sections. The smokers were assessed by using Fagerstorm nicotine dependent scale. To analyse the data SPSS (IBM SPSS Statistics for Windows, Version 26.0, Armonk, NY: IBM Corp. Released 2019) is used. Significance level is fixed as 5% ($\alpha = 0.05$). P-value <0.05 is considered to be statistically significant. Descriptive statistics was expressed using frequency and percentage, Inferential statistics was analysed using chi-square to find out the significance difference among the study groups.

III.RESULTS

Table 1: Descriptive Statistics Of Questionnaire To Assess The Influence Of Multimedia On Tobacco Users

S.no	QUESTIONNAIRE	OPTIONS	Frequency (N-162)	Percentage (%)
1	Do you consume any of the following?	Alcohol	42	25.9
		Tobacco	83	51.2
		Both	37	22.9
2	What is your smoking status	Current smoker	106	65.5
		Past smoker	56	34.5
3	What influenced you to start smoking	Stress	56	34.5
		Peer pressure	42	25.9
		Multimedia or social media	23	14.2
		Someone in family	18	11.1
		Other reason	12	7.49
		No reason	11	6.81
4	How many hours a day do you use your phone?	Less than 1 hour	35	21.6
		1 – 3 hours	42	25.9
		3 – 6 hours	30	18.6
		More than 6 hours	55	33.9
5	How many movies do you watch per month?	0 – 5	46	28.3
		5 - 10	56	34.5
		Greater than 10	60	37.2
6	Have you seen movies with smoking scenes?	Yes	101	62.3
		No	30	18.5
		Maybe	31	19.2
7	Do you support smoking scenes shown in movies and on TV	Yes	40	24.6
		No	104	64.1
		maybe	18	11.3
8	Do you or your friends practice these smoking scenes as shown in the movies	Yes, I do	18	11.1
		No but my friends do	39	24.1
		No, neither my friends nor I do	105	64.8
9	Why do you think youth get influenced by smoking scenes?	Favourite actor	40	24.6
		The character's personality in the movie	28	17.3
		Peer pressure	55	33.9

		I disagree, youth does not get influenced by smoking scenes	39	24.2
10	Do you read the statutory warning message before movies or TV shows containing smoking?	Yes	107	66.1
		no	55	33.9
11	Have these warning message influenced you? (In terms of stopping the habit)	Yes, I have stopped smoking	82	50.6
		No, it has no influenced on me	57	35.2
		Not applicable (if past smoker)	23	14.2
12	Have these warning messages influenced you? (In terms of reducing the habit)	Yes, I have reduced the number of cigarettes per day	72	44.8
		No, it has no influence on me	57	35.2
		Not applicable	33	20

Table 1 shows the descriptive statistics of the questionnaire to assess the influence of multimedia among tobacco users which showed that 22.9% of people consume both tobacco and alcohol where 51.2% of people consume only tobacco and it appears 65.5% people are currently smoking and also displays that 25.9% people started smoking as peer pressure. Additionally it shows that 33.9% people use their mobile phone more than 6 hrs in daily basis besides 21.6% people use their mobile phone less than 1 hr, 62.3 % people have seen movie

with smoking scene and 24.6% of people have supported movies with smoking scene where 11.1% of people have practiced smoking from smoking scenes as well 24.6% of people think that youth are influenced from smoking scenes which includes with 66.6% people have read the statutory warning before the movies however 50.6% of people have stopped smoking seeing the statutory warnings and 44.8% of people have reduced the number of cigarettes seeing the statutory warnings in the movies .

Table 2: Association Between The Multimedia Questionnaire Recorded Among The Different Level Of Smoking Dependant Individuals

S.no	QUESTIONNAIRE	OPTIONS	Low level smokers (N-76)		Moderate level smokers (N-60)		High level smokers (N-26)		P-value
			Frequency(n)	Percentage (%)	Frequency(n)	Percentage (%)	Frequency(n)	Percentage (%)	
1.	Do you consume any of the following?	Alcohol	30	40.3	18	30	7	26.9	0.031*
		Tobacco	38	46.7	30	50	13	50.1	
		Any other drugs	8	13	12	20	6	23	
2.		Current smoker	54	71.1	32	53.3	20	76.9	0.045*

	What is your smoking status	Past smoker	22	28.9	28	46.7	6	23.1	
3.	What influenced you to start smoking	stress	25	32.8	20	33.3	10	38.5	0.079
		Peer pressure	18	23.6	18	30.1	7	26.9	
		Multimedia or social media	15	19.7	11	18.3	5	19.4	
		Someone in family	8	10.7	6	10	2	7.6	
		Other reason	6	7.8	2	3.3	1	3.8	
		No reason	4	5.4	3	5	1	3.8	
4.	How many movies do you watch per month?	0 – 5	11	14.4	15	25	6	23	0.049*
		5 – 10	21	27.8	20	33	9	34.6	
		Greater than 10	44	57.8	25	42	11	42.4	
5.	Have you seen movies with smoking scenes?	Yes	42	55.2	36	60	10	38.5	0.036*
		No	18	23.6	16	26.6	6	23	
		Maybe	16	21.2	8	13.4	10	38.5	
6.	Do you support smoking scenes shown in movies and on TV	Yes	23	30.4	15	25	6	23	0.067
		No	23	30.2	25	41.6	10	38.5	
		maybe	30	39.4	20	33.4	10	38.5	
7.	Do you or your friends practice these smoking scenes as shown in the movies	Yes, I do	25	32.8	20	33.4	4	15.3	0.049*
		No but my friends do	19	25	25	41.6	10	38.4	
		No, neither my friends nor I do	32	42.2	15	25	12	46.2	
8.	Why do you think youth get influenced by smoking scenes?	Favourite actor	19	25	11	18.3	5	19.2	0.095
		The character's personality in the movie	12	15.7	8	13.3	4	15.3	

		Peer pressure	28	36.8	21	35	10	38.6	
		I disagree, youth does not get influenced by smoking scenes	17	22.5	20	33.4	7	26.9	
9.	Do you read the statutory warning message before movies or TV shows containing smoking?	Yes	56	73.6	32	53.4	18	69.3	0.23
		no	20	26.4	28	46.6	8	30.7	
10.	Have these warning message influenced you?	Yes, I have stopped smoking	23	40	19	31.6	7	26.9	0.046*
		No, it has no influenced on me	28	27	27	45	10	38.5	
		Not applicable (if past smoker)	25	33	14	23.4	9	34.6	
11.	Have these warning messages influenced you?	Yes, I have reduced the number of cigarettes per day	29	38.1	21	35	11	42.3	0.024*
		No, it has no influence on me	13	17.2	10	16.6	5	19.2	
		Not applicable	34	44.7	29	48.4	10	38.5	

Table 2 shows the association between the multimedia questionnaire recorded among the different level of smoking dependant individual by accessing the low-level smoker, moderate level smoker and high-level smoker. It shows 40.3% of low-level smoker consume alcohol and 30% of moderate level smokers consume alcohol and 26.9% of high-level smokers consume alcohol. On accessing the smoking status, it shows 71.1% are current low-level smokers, 53.3% of moderate and 76.9% high level smokers. It clearly shows that 19.7% of low level smokers has said that they were influenced by multimedia and 33.3% for moderate and 38.5% for high level smokers have started smoking due to the influence of multimedia. 57.8% of low level smokers watch more than 10 movies a month and 42% of moderate level smokers and 42.4% of high level smoker watch

more than 10 movies a month in which 55.2% of low level smokers have watched movies with smoking scene, 30.4% support the scenes and 60% of moderate level smokers have watched smoking scenes in movies, 25% support the smoking scenes and 38.5% of high level smokers have watched movies with smoking scenes and 23% support the scenes. 40% of low-level smokers have stopped smoking due to the statutory warning in the movies where as 31.6% of moderate level smokers have stopped smoking and 26.9% have stopped smoking due to the warning in the scene, 38.1% of low-level smokers have reduced the habit, 35% of moderate level smokers have reduced the habit and 42.3% of high-level smokers have reduced the habit because of the statutory warning in the movies.

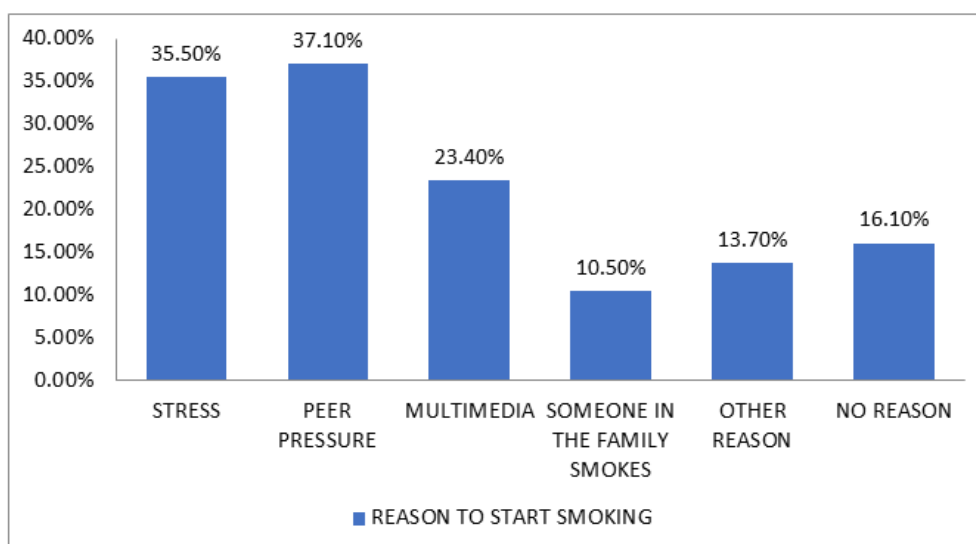


Figure 1: Association of Media Exposure and Current Smoking

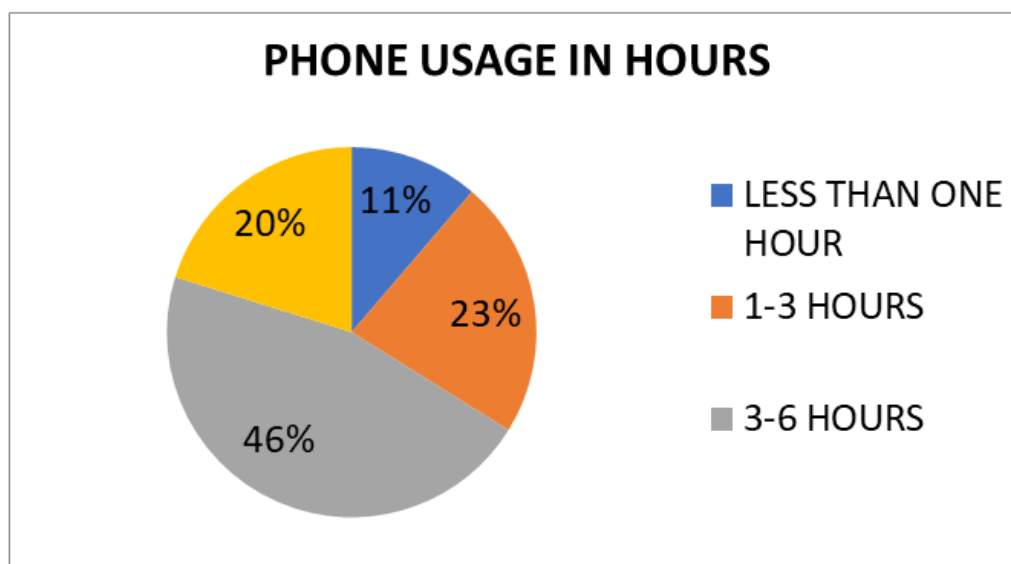


Figure 2: Association of Phone Usage and Current Smoking

IV. DISCUSSION

The present survey showed distinct patterns of association of tobacco smoking with media exposure. The results of the survey were in consonance with the various surveys conducted abroad by Charlesworth et al¹³ (Smoking in the movies increases Adolescent Smoking: A Review), Charlesworth et al suggests that the images of smoking in movies both normalize the behaviour and downplay the negative health effects associated with smoking and teens forgo to long term effects of smoking to get the short-term pleasures and approval of their peers. Philip Gendall et al¹⁴ (Effect of Exposure to Smoking in Movies on Young Adult Smoking in New Zealand) among others. A study by Viswanath et al says that the literature on media effects posits that media exposure may influence behaviors in two ways: frequency of exposure to different media and the content in the media¹⁵. The current study shows that 45% of highly dependent smokers (Derived from the Nicotine Fagerstorm Dependence scale) watched greater than 10 movies of month and a large chunk of the sample population (66%) used their phone for a minimum of three hours per day. This finding holds true for the present study where 90% of all survey participants have seen the smoking statutory warning seen in movies but on the other hand only 12% of the participants

responded as “extremely influenced” by the statutory warnings.

In the current study, the causative factor for tobacco smoking in link with media exposure was also assessed albeit, objectively. It was noted that in 23% of the survey population the sole reason for starting smoking was Multimedia. In 32% of the survey participants the usage of tobacco by their favourite actor in the movies accounted for their influence of smoking. It is interesting to note that 20.2% of the participants even practice the signature moves of the actors after watching their movies. This comes as no surprise in a country like India, where celebrities are idolized.¹⁶ Furthermore a wide spectrum of environmental factor exposure and their incident effects were covered by this survey. Stress and peer pressure as a sole reason contributed for 75% of the reason for initiation of the smoking habit whereas in 10% of the participants the sole reason to turn toward smoking was close family exposure. Additionally, Habits like alcohol when used in conjunction with tobacco (in 57%) of the population further illustrates the increased dependence of smoking. Some of the strengths of this study include the inclusiveness of the population in terms of age (ranging from 15yr to 35 yr) and gender (both male and female). The population were an amalgamation of rural, sub-urban and urban populations constituted the survey population. The current study

encompasses the cause-and-effect phenomenon by questioning and cross questioning the various movie-related practices among the population. This paves the way to establish and justify a direct and positive relationship of smoking with media exposure.

The results of this study are objected with the same drawbacks as any other cross-sectional survey which prohibits us from drawing causal references. Further longitudinal studies are required whether exposure of media and related content instigates onset of smoking. Secondly, as the sample size was limited to a single locality a widely diversified sample size could not be obtained. Thirdly, due to the objective nature of many questions there is uncontrollable confounding although the best attempt was given on the part of the examiners to prevent it. Finally, this study does not attempt to provide any specificity about the correlation of the exact content of the movies in question as the most popular movies were drawn to the questionnaire listing and further studies must be carried about to study the relationship of the movie content and smoking exposure in a meticulous matter.

V. CONCLUSION

The study result concludes that the influence of multimedia projects on the incidence of tobacco uses in adolescence, the advertisement of tobacco uses in national media should be avoided to decrease the incidence of tobacco use.

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