

ORIGINAL ARTICLE

Effectiveness of Audio Visual Counselling in Tobacco Consumers Attending Tobacco Cessation Clinic-A Prospective Interventional Study

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ABSTRACT

Objective: Tobacco is the legally and commonly available substance that will kill almost 30-50% of its users so curtailing its use can significantly reduce the global mortality and morbidity. Objective of this study was to record the tobacco quit rates in apparently healthy individuals. Abstinence up to the time of 6 months of follow up was set as the primary outcome measure

Methods: Single center study was undertaken in 524 subjects over a period of 18 months at King George's Medical University, Lucknow, India. Apparently healthy attendants accompanying patients attending the department of Respiratory Medicine were the subjects for the study. Along with intensive counselling, demonstration videos and live interaction of patients were taken help of in the study.

Results: Smokeless tobacco use was seen in 326(62%) subjects, remaining 198(38%) were smokers. 85% of subjects were males. 18.7% quit rate was eventually recorded at the end of study.

Conclusion: Around 60% of its consumers want to quit but roughly only about 10% succeed. We observed better quit rates (18.7%) in our study, rigorous follow ups coupled with specialist behavioral were the key elements of the study. Implementation of strict policies for use of tobacco is the need of the hour.

Key-Words: Tobacco, Smoker, Smokeless Tobacco

INTRODUCTION

Tobacco is undoubtedly the biggest killer of its own users which is legally, commonly and very easily available. It kills almost one third to half of the people who consume it and its dependence is one of the most hazardous activity adversely affecting the global health. It is the leading preventable risk to health be it physical, mental, social and even the financial well-being. The Global adult tobacco survey (GATS 2016-2017) reports that 42.4% men and 14.2% women currently use tobacco. There is an endless list of ill effects of this dreaded substance affecting almost every system of the body and is also a cause of many leading cancers. The available literature says that tobacco products contain around 5000 toxic substances and many carcinogens out of which nicotine, carbon monoxide and tar comprise the most dangerous constituents.¹ Tobacco is available in smoked as well as smokeless forms. Bidi, cigarette, cigar, cheroot, hookah and latest intruder being the e-cigarette are the popular forms of smoked tobacco. Quid, khaini, guthkha, snuff are the popular varieties of smokeless

tobacco. First, talking about smoked tobacco, it primarily affects the respiratory system or the lungs causing Chronic obstructive pulmonary disease (COPD) and lung cancer although it is now a documented risk factor for various kind of Interstitial lung diseases (ILD) and as a trigger for asthma too, increased risk of tuberculosis is too attributed to smoking. COPD is currently the fourth leading cause of death in the world and is projected to rise to third place by 2020², the burden of this dreaded disease is going to increase owing to the continued exposure to risk factors as well as aging³. Lung cancer as we all know is the leading malignancy of the globe and the highest risk is due to tobacco smoke. Coming to use of smokeless tobacco (SLT), it alone is believed to affect almost 350 million people and is associated with major adverse effects like oral cancer, cardiovascular problems and myocardial infarction.⁴ Health hazards of second hand smoke and environmental tobacco smoke are equally detrimental. Tobacco also contributes significantly to the dangerous air pollution levels. Health care system of every country

should address nicotine dependence with utmost responsibility. There are various methods to assist in quitting tobacco use ranging from counselling, medications and using quit lines/services, with different costs and effectiveness. Many patients who are aware of ill effects of tobacco abuse are interested in quitting. GATS (2016-17) reports that around 55.4% of smokers and 49.6% of smokeless tobacco users plan or think to quit. The treatment method should be importantly matched to the local and cultural context and to the patient's needs.⁵ It needs to be emphasized that reinforcement and repetition are key factors of the counselling methods.⁶ In the present study we observed the quit rates for tobacco consumers in both smokers as well as SLT users. The tobacco consumers included in our study were apparently healthy attendants of patients who visited outdoors and indoors of our department.

METHODS

After taking approval from institutional ethics committee (IEC), single center prospective interventional study with pre-post design was conducted at the tobacco cessation clinic of department of Respiratory medicine at King George's Medical University, Lucknow, India over a period of 18 months (June 2017- December 2018). The objective of the study was to observe the quit rate for tobacco with repetitive counselling and motivation coupled with use of audio visual devices and patient interaction. The primary outcome measure was set as abstinence up to 6 months of follow up.

After initial drop outs, a total of 524 subjects were enrolled for the study comprising of 445 males and 79 females. Subjects included were the attendants accompanying patients attending the Department of Respiratory Medicine. Apparently healthy attendants (18 years and above) indulged in tobacco use, either smoked or smokeless were included in the study. Attendants who denied to give consent were excluded from the study. The subjects included were enrolled for the tobacco cessation program and diverse methods were employed to aid them in quitting tobacco including intensive and repetitive counselling along with use of posters and educational pamphlets giving information about the benefits and necessity of quitting tobacco, they were also shown demonstration videos and interviews of patients suffering from tobacco abuse on audio visual devices like cell-phones, laptops and projectors, the subjects were also taken for rounds to indoor wards to observe the ill effects of abuse and were also made to interact with the patients. Standard 5'A's (Ask, assess, advise, assist, arrange) approach was used with implementation of 5'R's i.e. telling the participants about the relevance, risks, rewards, roadblocks along with repetition of advice. The subjects were advised to follow the

5'D's to help fight cravings i.e. delaying interval between consumption, drinking water to keep mouth occupied, distracting themselves, taking deep breaths and discussing their problem with friends or relatives and taking help of quit line services.

The enrolled participants were kept in regular follow up with monthly visits, they were also telephonically communicated frequently.

The data was compared using Chi square test. Statistical package for social sciences (SPSS V.25) was used to analyze the data. A 'p' value of <0.05 indicated a statistically significant association.

RESULTS

Out of 524 subjects who participated in the study, 85% were males. Majority of subjects belonged to the 30-50 year age group, most of the participants belonged to upper lower and lower socio economic status in accordance with the modified Kuppaswamy scale, 326 subjects were smokeless tobacco users and rest 198 were smokers i.e. 62% and 38% respectively. During the early part of the study there were 146 subjects who made quit attempts but at the end of study there were 98 subjects (18.7%) who eventually abstained tobacco intake at 6 months of follow up and met the primary outcome. All the participants who made quit attempts experienced withdrawal symptoms, most of them reported with irritability & anxious behavior, constipation was the next common complaint. No significant gender difference was found for the type of tobacco use, similarly there was no significant difference in both the sexes for the quit rate reported.

Table 1- Sample Characteristics (N=524)

Characteristics	Frequency(%)
Smokeless tobacco users	326(62)
Smokers	198(38)
Age at baseline	
<30 Years	58(11)
30-50 Years	435(83)
>50 Years	31(6)
Gender	
Male	445(85)
Female	79(15)
Socio economic class (Modified Kuppaswamy 2019)	
Upper&Upper middle	24(4.5)
Lower middle	39(7.4)
Upper lower	354(67.5)
Lower	107(20.4)
Number of Quit attempts before the most recent one and up to 6 months at follow up	
0	378(72.1)
1	48(9.1)
2	65(12.4)
Stopped abruptly during last quit attempt at follow up	33(33.6)

Table 2- Distribution of Subjects according to type of tobacco use

Type of tobacco use	Male (n=445) (%)	Female (n=79) (%)
Smokeless tobacco	278 (62.5)	48 (60.8)
Smokers	167 (37.5)	31 (39.2)

Chi square value 0.0837, p value 0.77

Table 3: Subjects who maintained tobacco abstinence at 6 months of follow up

Subjects maintained tobacco abstinence	Male (n=64) (%)	Female (n=34) (%)
Smokeless Tobacco	37 (53.1)	20 (58.8)
Smoked Tobacco	27 (46.9)	14 (41.2)

Chi square value is 0.0093, p value 0.92

DISCUSSION

The present study reemphasizes the importance of reinforcement and rigorous follow ups coupled with specialized behavioral support. Secondly, we also took help of audio visual devices demonstrating video clips of diverse ill effects of tobacco abuse, there were clips of interviews of numerous patients suffering from tobacco abuse, the participants were also made to interact live with the patients in the outdoors and during the indoor rounds.

The Ministry of Health and family welfare, India, with World Health Organization India Country office started numerous tobacco cessation clinics in 2002 to address tobacco cessation, 34,741 consumers attended these clinics in the first five years and baseline information of 23,320 was recorded.⁷ 69 % were subjected to behavioral intervention and rest received pharmacotherapy as well. At 6 weeks follow up, 22 % reported harm reduction i.e. reducing tobacco use by at least 50% of the baseline use, 14 % were reported to have completely quit tobacco.⁸ Another community based study in rural areas of Tamil Nadu reported a quit rate and harm reduction of 12.5% and 21.7% respectively in the intervention group as compared to quit rate and harm reduction rate of 6% and 9 % respectively in the control group after 2 months follow up.⁹ A study on smoking cessation intervention on patients visiting primary health centres in Kerala reported quit rates of 16% in minimal intervention group which received doctor's quit advice and 21% in the augmented intervention group which received additional assistance by trained non-doctor health professional.¹⁰ There is an increasing need for the all doctors to motivate patients to quit tobacco use as it will result in large number of people to give up tobacco use however studies suggest that doctors offer to quit to a small number of patients.¹¹

Quit rates have been seen to be favorably affected by co-morbidities of patients like chronic obstructive

pulmonary disease in which quit rates as high as 50% have been reported.¹² In patients with diabetes, quit rate of 51.8% and 45.8% at six months and one year of follow up respectively has been reported in the intervention group where an additional brief counseling session was given to patients as compared to control group where quit rate of 12.5% and 19.8% at six months and one year of follow up respectively.^{13,14} Various studies linked to tuberculosis have been conducted attributing even small amount of smoking to the disease.¹⁵, a study conducted in Kerala reported two times higher smoking rate in tuberculosis patients compared to the general population, it also emphasized on the importance of tobacco cessation advice.¹⁶ Shifting of TB patients from smoking to smokeless tobacco has also been reported from India.¹⁷

As compared to the west, unassisted smoking cessation is very low in India.¹⁸ It has been observed that in our country people quit tobacco after they contract some illness so tobacco cessation in the general population should be addressed by doctors and health professional and this also needs to go beyond the health sector as shown in a study conducted in Bihar by teachers. Educational policies along with cessation support and tobacco control policies were the interventions. 20% quit rate was reported amongst teachers in the intervention group as compared to the control group where only 5% quit rate was recorded.¹⁹

Coming to our study, quit rate of 18.7% was recorded which was better than the average quit rate of many such projects however there were few limitations. Firstly, as ours is a limited resource setting, the other modalities of intervention like Nicotine replacement therapy (NRT) and other pharmacotherapy was not included. Secondly, the study was conducted in a hospital based setting where already the attendants were accompanying the diseased patients so it may have improved the quit rate. Thirdly, the sample size should have been larger with better age and sex distribution. Lastly, harm reduction rate was not included as an outcome of the study which could have made the study more impactful.

CONCLUSION

The patients must be emphasized the fact that quitting at any stage is beneficial and will not only improve the quality of life but will strengthen the economic status too. They must also be conveyed that tobacco in any form and in any dosage is harmful. Use of quit line services should be strongly advocated. Strict policies and legislative bans like COTPA (Cigarette & other tobacco products act) should be effectively implemented by the government for the sale and purchase of tobacco products. Tobacco

product emissions also contribute to the dreaded air pollution. Despite of the fact that almost 60-70% of the consumers want to quit, quit rates have been poor of the various programs and interventions owing to lack of reinforcement and poor follow ups. Better quit rates were observed in our study i.e. 18.7%, with key role played by the sufferers of tobacco abuse.

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