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RESEARCH ARTICLE

TOBACCO-FREE WORLD: A DREAM FOR ONE AND ALL

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ABSTRACT

Tobacco consumption has led to devastating effects all over the world. Nicotine in tobacco is considered as one of the major addictive component that leads to long-term dependence on tobacco. Tobacco use is continuing in India since ages, despite of numerous tobacco control policy. Tobacco in India is used in two forms: smoking and smokeless form. Smoking form includes cigarettes, bidis, etc. whereas smokeless tobacco includes ghutka, khaini etc. Quitting tobacco is the most important interventional strategy that has to be practiced to improve the oral health status and quality of life of individuals. Government sector can help in this issue by increasing the price of tobacco products through taxation, and should also ensure that health professionals routinely advise smokers to stop and offer assistance for quitting, and make available pharmacological and behavioral support for cessation.

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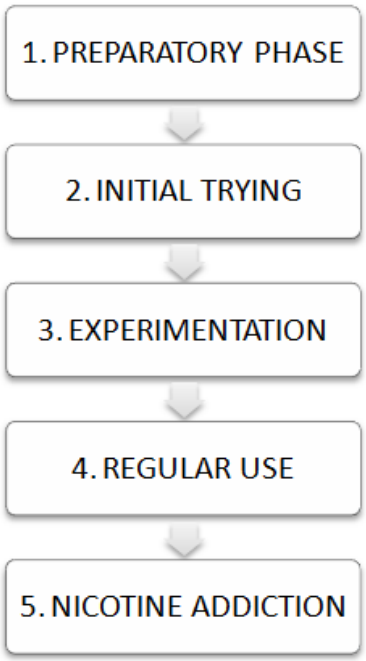
INTRODUCTION

Smoking still is considered to be one of those diseases with numerous and long lasting deleterious effects on general health. To combat this widely spread tobacco use, concept of "tobacco cessation" should be encouraged. Portuguese brought in tobacco culture in India 400 years ago. A prediction by World Health Organization (WHO) stated that more than 500 million people will be killed by tobacco use by the end of 2030. It was also further predicted that 'tobacco use' will become the single leading cause of death. It has been estimated that one person is killed every 6 sec due to tobacco use.

Tobacco in India is used in two forms: smoking and smokeless form. Smoking form includes cigarettes, bidis, etc. whereas smokeless tobacco includes ghutka, khaini etc. The addictive component present in tobacco products is nicotine. There are different stages of nicotine addiction as shown in the flow-chart 1. The first stage is known as ' preparatory phase' in which the knowledge, perception, opinion and view of the patient is assessed. The second stage comprises of ' initial trying' in which the individual starts or initiates his experience of tobacco use. The third stage 'experimentation' refers to frequent and repeated smoking over a long period of time. The fourth stage as named 'regular use' refers to the periodic use of tobacco at specific time of the day or certain weekdays or weekends in a week.



Flow-Chart 1. Stages of nicotine addiction

All through these stages the individual finally gets addicted to nicotine with an internal mandatory need of nicotine everyday. [1] Inspite of worldwide awareness of diseases associated with tobacco, it's persistent use has lead to public health issue. More than 7 billion people are killed every year due to tobacco use. Majority of them are effected by direct consumption of tobacco while some being effected indirectly by second hand smoke. Tobacco smoking is seen to be increasing in the WHO Eastern Mediterranean Region and the African Region. Quitting tobacco is the most important interventional strategy that has to be practiced to improve the oral health status and quality of life of individuals. Tobacco cessation is an element of comprehensive tobacco control strategy which must be followed strictly to create a 'tobacco-free' environment.

TOBACCO CESSATION MODEL [2]

In 1982, Prochaska et al. developed a systematic model which represented 5 stages of individual using tobacco products with respect to their perspective and conduct towards quitting tobacco based on nicotine dependence.

Table 1. Tobacco cessation model

Pre- contemplation phase	Individuals who are not planning or thinking to quit smoking
Contemplation phase	Individuals who have planned to or started thinking to quit smoking
Preparation phase	Individuals who have started to or are ready to quit smoking
Action	Individuals who are actually quitting or trying to quit
Maintenance	This stage includes maintaining 'no-smoking' phase on long-term basis

BEHAVIOURAL APPROACH OF TOBACCO CESSATION

The basic standard intervention method used for tobacco cessation is counselling. The counselling intervention procedure includes use of standard 5A's and 5R's.[3]

Table 2. 5a's Of Tobacco Cessation Counselling

Ask	The initiation of the procedure includes asking about the tobacco use from the individual. The tobacco use status of the individual should be identified.
Advice	The next step is to advice all the tobacco users to quit. Clear, strong, supportive messages should be used to advice the tobacco users.
Assess	Asses the commitment of the individual and what all barriers are there that has to be overcome. The stage of change should be determined. Self-efficacy or the attempts to quit tobacco the user has made has to be determined.
Assist	1. For Users Willing to Change 2. For the User Unwilling To Change: Promoting the Motivation To Quit 3. For the User Who Has Recently Quit : Preventing Relapse
Arrange	Follow-up appointments should be arranged and progress on plan should be reviewed.

PHARMACOLOGICAL APPROACH OF TOBACCO CESSATION

This intervention method can be used in every tobacco user as there is no absolute contraindication.[5] Pharmacotherapy include different methods: Nicotine Replacement Therapy, Medication that mimic nicotine effects, Antagonists, Medication that make intake aversive.

Table 3. 5R'S of tobacco cessation counselling

Relevance	The tobacco user should be motivated to seek or discover why quitting tobacco is personally relevant.
Risks	The negative consequences or risks associated with continued use of tobacco, both, long-term and short- term should be asked determined by the user.
Rewards	The tobacco user should be asked about the benefits that he would be getting if he quits the habit. Also the specific health benefits should be explained in a comprehensible manner.
Roadblocks	The tobacco user should be asked to discover the barriers to quitting. All the specific hindrances should be noted.
Repetition	Reinforce the motivational message at every opportunity and reassure that repeated quit attempts are not unusual.

NICOTINE REPLACEMENT THERAPY

This is one of the pharmacological methods used to provide nicotine to tobacco users in low doses to meet their requirements of nicotine but not beyond level that can cause addiction or deleterious effects.[6] NRT can be provided in different formulations:

- Chewing Gums- available in doses of 2-4 mg. Initially, it tastes unpleasant and also causes jaw pain and soreness of mouth.
- Sublingual tablets- recommended dose is 1-2 tablets placed sublingually. Normal doses should be reduced and eventually withdrawn.
- Lozenges- Initial dose is one lozenge every 1-2 hrs. The treatment with lozenges is continued for 3 months and then withdrawn.
- Adhesive transdermal patches- Used transdermally for 16-24 hrs. Different sites of application of patches are hip

,trunk, upper arm. Gradual withdrawal is recommended by reducing the dose every 2-8 weeks.

- Nasal spray – usually recommended dose is: one spray into each nostril twice an hour. Local irritation is most common side effect of this spray.
- Nicotine inhalator cartridges- Initial dose is 6-16 cartridges/day for 12 weeks. The doses are reduced gradually.

MEDICATION THAT MIMIC NICOTINE EFFECTS

- Bupropion Hydrochloride: Bupropion SR
- Clonidine- dampens sympathetic activity
- Anxiolytics- diazepam, bet-blockers
- Antidepressants- patients with signs and symptoms of depression.
- Stimulants- Amphetamines.
- Anorectics - Encouraging results were obtained with fenfluramine and phenylpropanolamine in short term trials.
- Sensory replacement- Black pepper extracts, Denicotinised tobacco flavourings are useful in combating withdrawal symptoms.
- Acupuncture- release endorphins that helps in cessation.
- Devices- filters are most commonly used devices that helps in gradually reducing the amount of smoking.

ANTAGONISTS

Drugs like Mecamylamine, Naltrexone can be used.

MEDICATION THAT MAKE INTAKE AVERSIVE

Sulphides in tobacco are combined with silver acetate to produce bad taste and also to alter taste sensations. [7]

HURDLES IN QUITTING TOBACCO

There are numerous challenges and barriers to quitting tobacco products but once the person has started to think about quitting or is willing to quit, he or she should only be motivated regarding the benefits and advantages of quitting.[8] Every person has their own reasons for addiction to tobacco products. Due to lack of knowledge of ill-effetcs of tobacco on health most of the individuals continue using tobacco. Nature of nicotine dependence itself is the single most important factor affecting smoking cessation interventions. Even smoking a single cigarette can cause nicotine dependence. Also due to some of the old customs and superstitions people continue to follow the tobacco use.

CONCLUSION

Tobacco use effects nearly half of the population and causes death and disability further disturbing the physical and mental well-being of the individual. Approximately 1 billion population is indulged in this activity of tobacco consumption, out of which only 5% attempts to quit and succeeds for 6 or more than 6 months.[9] The fundamental cause of this is addiction to nicotine as it acts on brain and causes neuroadaptation further creating an urge to smoke to fulfil the depleted nicotine levels in brain. [1] Though behavioural counselling has proved to be beneficial in numerous aspects but combination of both psychotherapy and pharmacotherapy has increased the success rates of quitting as compared to either of them taken alone. Government sector can help in this issue by increasing the price of tobacco products through taxation, and should also ensure that health professionals routinely advise smokers to stop and offer assistance for quitting, and make available pharmacological and behavioural support for cessation.

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