



International Journal of Applied Dental Sciences

ISSN Print: 2394-7489
ISSN Online: 2394-7497
IJADS 2021; 7(1): 277-281
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www.oraljournal.com
Received: 22-11-2020
Accepted: 24-12-2020

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A questionnaire based survey to assess knowledge, attitude and practice regarding nicotine replacement therapy (NRT) among dental students in Navi Mumbai

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DOI: <https://doi.org/10.22271/oral.2021.v7.i1d.1145>

Abstract

The purpose of this study was to assess the knowledge, attitude and practice among the dental students including interns and postgraduate students towards Nicotine Replacement Therapy (NRT). This is a cross sectional survey done among 300 randomly chosen dental students from dental colleges in Navi Mumbai by distributing a self-prepared questionnaire about the awareness and use on NRT. Later, descriptive analysis was done on the data collected. Eighty four percent of the dental students were aware of NRT. Significant awareness was seen among the dental students, but only 28% of the dental students had the practice of always prescribing patients with NRT, 40% of the dental students prescribed NRT sometimes and the remaining 32% never prescribed NRT for tobacco cessation. The awareness on NRT and the practice of prescribing patients with NRT for tobacco cessation was not proportionate.

Keywords: nicotine replacement therapy, nicotine, tobacco, cross sectional survey

Introduction

Tobacco use is often considered to be a personal choice, this is contradicted by the fact that when fully aware of the health impact, most tobacco users want to quit but find it difficult to stop due to the addictiveness of nicotine. Systemic and oral health of the individual is profoundly altered by the use of tobacco in any form. A wide spectrum of disease including stroke, coronary artery disease, peripheral artery disease, gastric ulcer and cancers of mouth, larynx, esophagus, pancreas, bladder, uterine and cervix are associated with the use of tobacco. It is also a major cause of chronic obstructive pulmonary disease and risk factor for low birth weight babies [1]. It has also been recognized that the use of tobacco is a significant risk factor for periodontitis affecting the prevalence, extent and severity of disease. Tobacco use is associated with increased pocket depths, loss of periodontal attachment, alveolar bone and higher rate of tooth loss. In addition, it may influence the clinical outcome of non surgical and surgical therapy as well as long term success of implant placement [2]. Available literature suggests that nicotine affects gingival blood flow, cytokine production, neutrophil and other immune cell function, connective tissue turnover, which can be the possible mechanisms responsible for overall effects of tobacco on periodontal tissues. The field of dentistry has recognized the role of oral health professionals in discouraging tobacco use. Patients are comfortable with receiving dental advice to quit tobacco use. Reducing tobacco use is essential in improving quality of life, preventing and treating many oral diseases therefore tobacco prevention and control are important. Henceforth, Nicotine replacement therapy (NRT) came into existence which temporarily replaces much of the nicotine from tobacco to reduce motivation to consume tobacco and nicotine withdrawal symptoms, thus easing the transition from cigarette smoking to complete abstinence [3]. Various alternative nicotine sources (gum, transdermal patch, nasal spray, inhaler and sublingual tablets/lozenges) have been incorporated into tobacco cessation programs. These NRTs are in general well tolerated and have minimal adverse effects. Dentists can deliver specific, authoritative information concerned with the adverse oral effects of tobacco use as they render frequent dental services to adult and adolescent smokers. Therefore this survey was conducted to assess the knowledge, attitude and

practice among the dental students including interns and postgraduate students from dental colleges in Navi Mumbai towards Nicotine Replacement Therapy (NRT).

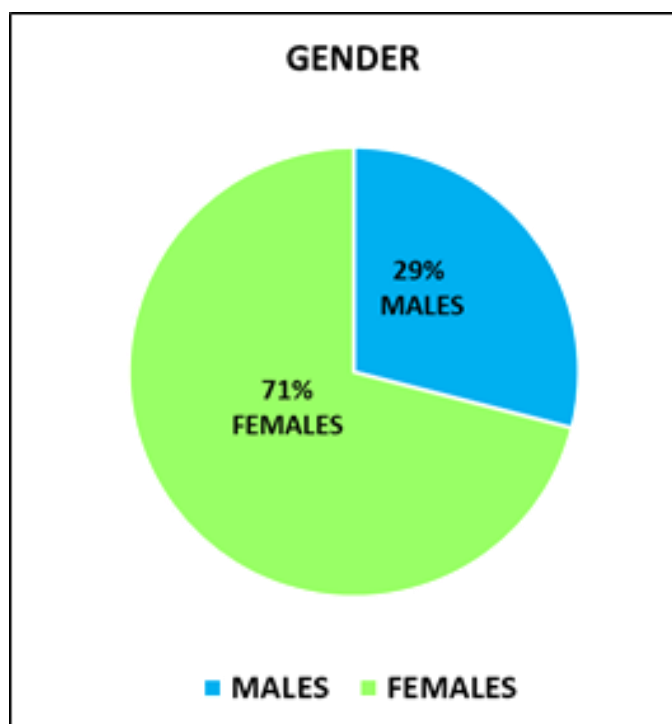
Materials and Methods

A cross sectional online questionnaire survey was carried out among 300 randomly chosen dental students including interns and postgraduate students of various dental colleges from Navi Mumbai, India. The survey was conducted in September, 2019. The survey comprised of total 9 questions. The survey questionnaire was converted to google form and the link was sent through various social media platforms. The responses obtained were assessed based on the knowledge, attitude and practice towards prescribing Nicotine Replacement Therapy (NRT) and the awareness regarding Nicotine Replacement Therapy (NRT). The questionnaire also provided information on demographics (age, sex, qualification). The obtained data were statistically analysed in the form of frequency and percentage and descriptive statistics were presented in the form of suitable pie diagrams and graphs.

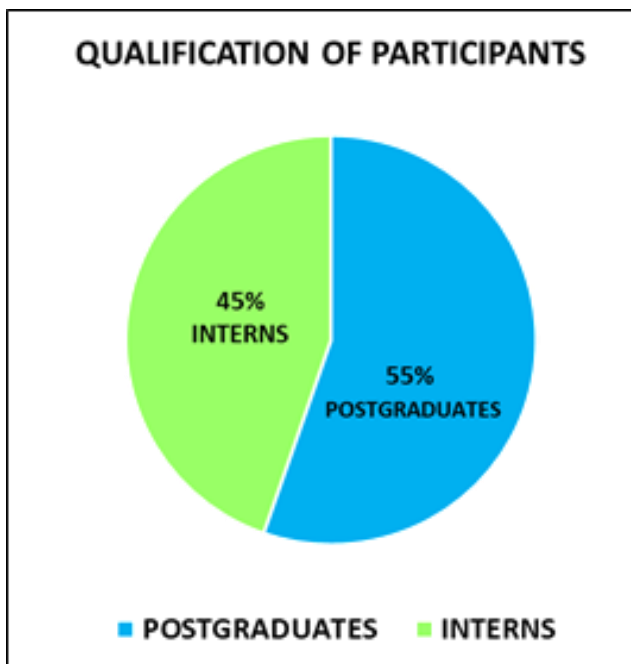
Results

Demographic distribution of participants by their gender (Graph 1) shows that 71% (213 out of 300) participants were females and 29% (87 out of 300) participants were males. Demographic distribution of participants by their qualification (Graph 2) indicates that 45% (134 out of 300) participants were interns and 55% (166 out of 300) participants were postgraduates students. The knowledge and awareness (Graph 3) indicates that majority of the participants, 84% (252 out of 300) were aware of NRT and 16% (48 out of 300) were

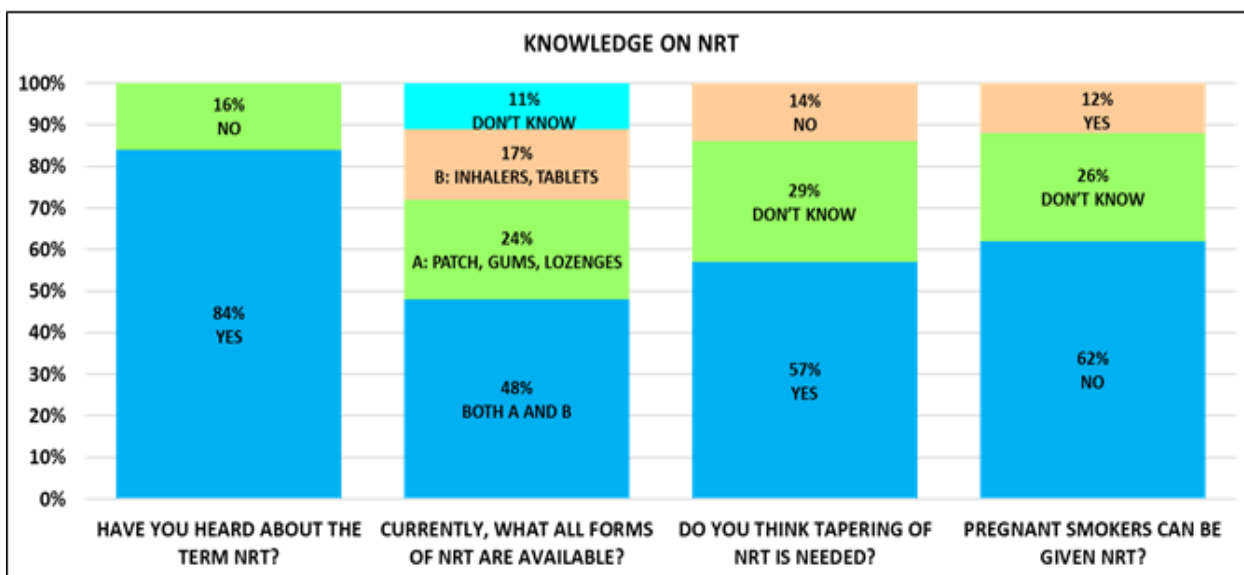
unaware. Knowledge on the forms of NRT shows that 48% (142 out of 300) of the participants were aware of all the forms of NRT, 24% (71 out of 300) were aware of only the patch, gums and lozenges form of NRT, 17% (53 out of 300) were aware of only the inhaler and tablet forms of NRT. Knowledge on the requirement of tapering of NRT were also analysed and 57% (172 out of 300) were aware that NRT needs a tapering while 29% (87 out of 300) did not know about the tapering of NRT and 14% (41 out of 300) responded as tapering of NRT is not required. Knowledge on pregnant smokers and the use of NRT was assessed and 62% (187 out of 300) were aware that NRT cannot be prescribed to pregnant smokers while 26% (78 out of 300) were unaware and 12% (35 out of 300) responded that NRT can be given in pregnant smokers. Fifty-nine percent (177 out of 300) of participants agreed that the use of NRT is effective for the cessation of smoking whereas 28% (84 out of 300) did not have an idea on the effectiveness of NRT and 13% (39 out of 300) disagreed to the use of NRT being effective for the cessation of smoking (Figure 4). Attitude of the participants on the success rate of different cessation therapies were compared (Figure 5), 24% (72 out of 300) preferred NRT alone, 18% (54 out of 300) preferred counselling alone, 52% (156 out of 300) preferred the use of both NRT and counselling and 6% (18 out of 300) were unaware as to which therapy would be most effective in the cessation of tobacco consumption. Practice of prescribing NRT to smokers to help quit the habit was assessed (Figure 6) and it was observed that only 28% (84 out of 300) prescribed NRT, whereas 40% (120 out of 300) prescribed NRT sometimes and 32% (96 out of 300) never prescribed NRT.



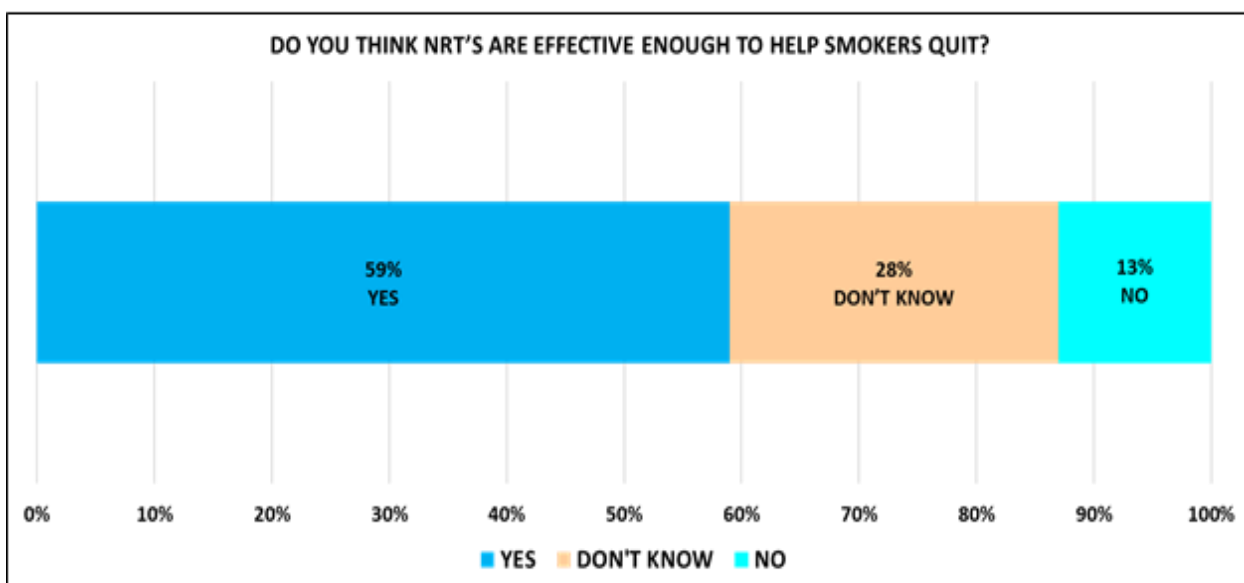
Graph 1: Demographic distribution of participants by their gender.



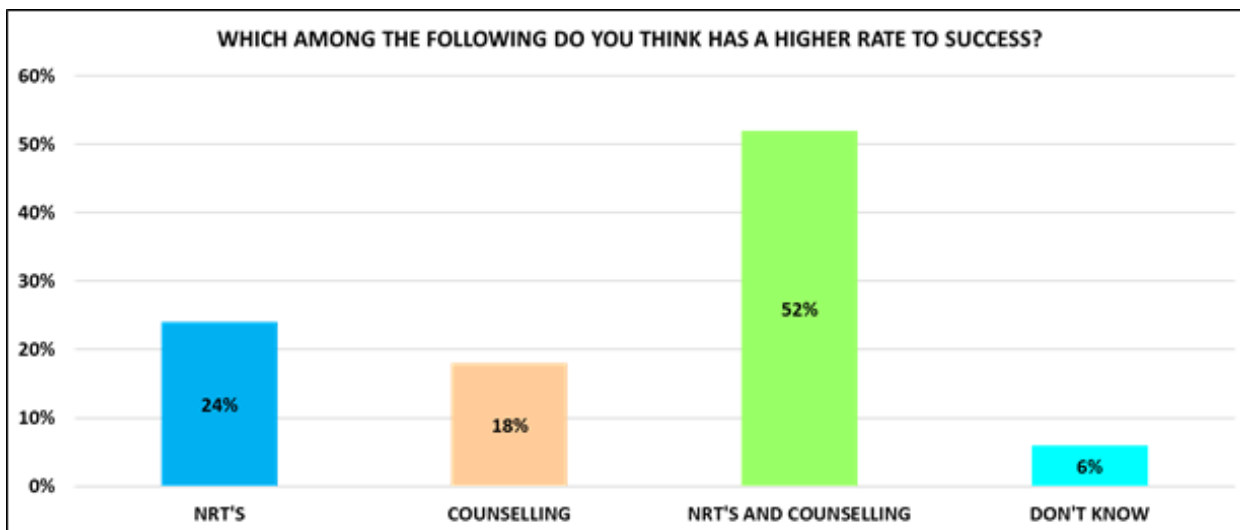
Graph 2: Demographic distribution of participants by their qualification.



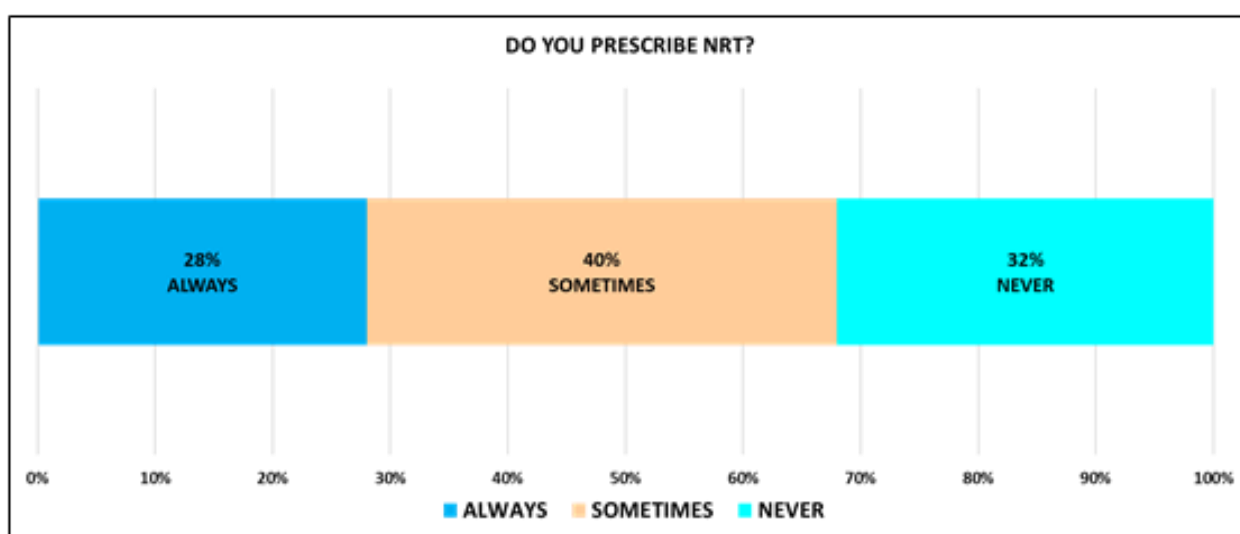
Graph 3: Knowledge and awareness on NRT



Graph 4: Attitude of the participants on effectiveness of NRT to help smokers quit.



Graph 5: Attitude of the participants on the success rate of different cessation therapies



Graph 6: Practice of prescribing NRT to smokers to help quit the habit

Discussion

Nicotine is the main active ingredient in tobacco products that reinforces individual to tobacco addiction behaviour [4, 5, 6], it is tobacco’s other components which cause widespread mortality and morbidity [7, 8, 9, 10]. Although almost all of the toxicity of smoking is attributed to other components in cigarettes, it is the pharmacological effects of nicotine that lead to tobacco addiction. Therefore, pharmacological interventions for tobacco cessation continue to evolve with our growing knowledge of the neurochemical basis of nicotine addiction. Nicotine is the main alkaloid of tobacco smoke and the principal modulator of the psychopharmacological effects associated with addiction [11]. Nicotine replacement therapy (NRT) aims to reduce motivation to consume tobacco and the physiological and psychomotor withdrawal symptoms through delivery of nicotine [3]. The evidence that NRT helps to stop smoking is now well accepted, and many clinical guidelines recommend NRT as a first line treatment for people seeking pharmacological help to stop smoking [12]. NRT is found to be an effective remedy to decrease cravings related to smoking cessation. As observed with cigarettes the methods used in this therapy will not produce the same peak levels of nicotine in the blood, hence do not cause the same subjective effects. However, they curb nicotine withdrawal symptoms. Smokers can now change their addictedness to a substitute nicotine

delivery system, which can be gently dropped out. In the present study, we found that 84% of the participants were aware of the term NRT, 48% were aware of the different forms of NRT, 57% were aware regarding the requirement of tapering of NRT and 62% were aware that NRT could not be prescribed to pregnant smokers, 59% agreed that NRT is effective enough to help smokers quit smoking and 52% were in favour of a combination of the use of NRT and counselling both in the cessation of tobacco consumption. So overall the participants had a fair amount of knowledge on NRT but the prescription of NRT to tobacco consumers to quit the habit is less practiced.

Conclusion

In our study, there was an imbalance in the ratio with respect to the awareness on NRT and the use of NRT to help smokers quit the habit. As health professionals have a pivotal role in the cessation of tobacco. Clinicians can induce a major difference even with a minimal intervention and also there would be an association, which exists between the intensity of intervention and outcome of tobacco cessation. Even when patients exhibits negative attitude toward a quit attempt, doctor-administered brief interventions compliment motivation and enhance the likelihood of impending quit venture. Therefore the practice of NRT to help tobacco consumers quit the habit should be practiced at a higher

frequency.

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