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EFFECT OF SELF-ESTEEM & SELF-EFFICACY ON LEVELS OF NICOTINE DEPENDENCE AMONG CURRENT SMOKERS IN BANGALORE - A CROSS-SECTIONAL STUDY

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ABSTRACT **Objectives:** The study aimed to assess the influence of self-efficacy and self-esteem on tobacco addiction among current smokers by assessing their effect on levels of nicotine dependence. **Materials and methods**: A cross-sectional study was conducted on smokers recruited from the tobacco cessation units of KLE Institute of Dental Sciences, Bangalore using convenience sampling. Self-esteem and self-efficacy were assessed using the Rosenberg Self-esteem Scale and the General Self-efficacy scale respectively. The outcome variable Nicotine Dependence was assessed using the Fagerstrom Test for Nicotine Dependence. Statistical analysis was performed on SPSS version 26 (p-value <0.05). **Results:** Low self-esteem and low self-efficacy were associated with severely high levels of nicotine dependence. **Conclusions:**Tobacco cessation Programs need to assess and alleviate low self-esteem and self-efficacy among smokers for better results and lesser relapses.

KEYWORDS : Self-esteem, Self-efficacy, Nicotine Dependence, Tobacco Cessation, Smoking

INTRODUCTION
The habit of cigarette smoking has emerged as the leading cause of preventable morbidities and mortalities with the number of deaths attributed to it set to reach 10 million per year by the year 2030, making it a global public health problem.[1]As per The Global Adult Tobacco Survey (2016-2017), 28.6 % of adults in India consumed Tobacco in any form, and every 10th adult smoked Tobacco. Compared to the previous Global Adult Tobacco Survey (2009-2010), there was just a mere 6 % point reduction in the prevalence of tobacco use in India.[2]

Even Despite general advances in smoking control, the high rates of treatment failure in smoking cessation programs raise a cause for concern. The process of quitting is insuperable, due to the ambivalence of nicotine dependence. Among those who seek professional help for tobacco cessation, only 3% succeed in quitting without the aid of CBT and medication, with a high relapse rate. This predicament may be attributed to the interplay of numerous factors involving the smoker that the cessation process doesn't address and ameliorate, making it imperative to understand these latent factors that dictate nicotine dependence.[3]

Self-esteem refers to our feelings about ourselves or the value we have for ourselves. Studies have shown that low self-esteem makes one vulnerable to affective disorders and predisposes the individual to affective disorders, self-critique, and social phobias leading to negative coping styles and addictive or risky behaviors.[4] Self-efficacy is a cognitive variable that impacts an individual's self-confidence to resist an adverse behavior such as tobacco use as well as determines a person's ability to initiate and sustain a behavior change. The self-efficacy theory has been used in vogue for the development of complex models of behavioral change for changing behavior related to substance abuse and tobacco

use cessation. Evidence is mounting that tobacco cessation attempts fail with insufficient motivating factors such as self-efficacy to quit.[5]

In light of the increasing evidence linking these variables of self-esteem and self-efficacy to habit initiation and quitting-related behavior, the study aimed to explore their effect on the levels of nicotine dependence among smokers to comprehend to what degree they influence tobacco addiction.

MATERIALS AND METHODS
Study Setting and Population
The study was approved by the KLE Society's Institute of Dental Sciences, Bangalore Institutional Ethics Committee (KIDS/IEC/06-2022/32). This cross-sectional study included 310 participants that were recruited from the Tobacco cessation center unit of KLE Institute of Dental Sciences in Bangalore from June 1, 2021, to August 31st, 2021 by convenience sampling method. Inclusion criteria were: participants had to be a Current smoker[7] (An adult who has smoked 100 cigarettes in his or her lifetime and who currently smokes cigarettes), 18-50 years of age, had to give informed consent to participate in the study, and were required to have an understanding of English. The exclusion criteria were: history of Mental Disorders, on any medications or therapy intended to assist in smoking cessation.

A close-ended questionnaire was employed to collect the information pertinent to the following socio-demographic variables: Age, Gender, Marital status, Type of Family, Number of dependents, and Employment status. The variables self-esteem and self-efficacy were assessed via the Rosenberg Scale[7] and the General Self efficacy scale[8], following which the participants were categorized as those with high and low self-esteem and those with high and low self-efficacy.

The dependent variable of nicotine dependence was assessed by administering the Fagerstrom test of Nicotine Dependence[9], following which the subjects were categorized as those with low, moderate, and high levels of nicotine dependence based on the cumulative scores from the test.

Statistical analysis:
SPSS version 26 (IBM Corp., Armonk, NY, USA) was employed for statistical analysis. Chi-Square test was used to assess the association between self-esteem and self-efficacy with levels of nicotine dependence, with the statistical significance set at p < 0.05.

RESULTS
Socio-demographic characteristics:
As seen in Figure 1 majority of the study participants were in the 31-40 years age bracket and nearly 99 % were males. Less than one-third of the study participants were unmarried and about a quarter hailed from a joint family. A large number of the participants had no dependents and more than 70 % were unemployed.

Figure 1: Socio-demographic details of the study participants
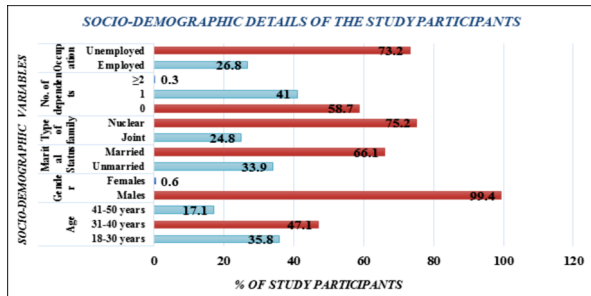
Chi-Square test revealed a statistically significant association between low self-esteem and high levels of Nicotine dependence. There was also a statistically significant association between low self-efficacy and high level of Nicotine dependence among the subjects (Table 1)

Table 1: Chi-square test to assess the association between self-efficacy and self-esteem with levels of nicotine dependence among current smokers

Independent variables		Nicotine Dependence			χ2 Statistic	p-value
		Mildly dependent	Moderately dependent	Highly dependent		
Low Self-efficacy	Absent	74	1	3	255.19	0.00*
	Present	7	35	190		
Low Self esteem	Absent	57	1	4	173.88	0.00*
	Present	24	35	189		

*p-value <0.05 statistically significant

DISCUSSIONS:
By the virtue of this study, we aimed at assessing the effect of self-efficacy and self-esteem on levels of nicotine dependence among current smokers. Our study revealed that the majority of the smokers were males, unemployed, hailed from a nuclear family, and in the 31-40 years age bracket. These results were consistent with the previous studies.10-11 The study showed that self-esteem and self-efficacy had an effect on the level of nicotine dependence, wherein the majority of the smokers with low self-esteem and low self-efficacy were found with severely high levels of nicotine dependence. Thus, the study shows that self-esteem and self-efficacy dictate

levels of nicotine dependence, and influence the cessation process. Low self-esteem has been shown to create difficulty for the chronic smoker in attempting a successful cessation attempt.12 Antti J. Saari et al. found those with weaker self-esteem in adolescence were at higher odds to smoke regularly in adulthood.4 Nikita B Rajani et al. found that mobile apps which positively impacted the self-efficacy of smokers were able to motivate smokers to make quit attempts.13 Hence, these variables are of notable consequence in nicotine addiction and play a critical role in the cessation process. The limitation of the study resides in the cross-sectional design which makes it difficult to ascertain temporality.

CONCLUSIONS:
This study demonstrates how low levels of self-esteem and self-efficacy are associated with severely high levels of nicotine dependence and asserts the need to tailor tobacco cessation therapies to enhance self-esteem and self-efficacy among smokers to alleviate their nicotine dependence and ease their cessation process.

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