Original Research Article

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A cross sectional study to find out the prevalence of type D personality and its associated factors among undergraduate students of a dental college in western Uttar Pradesh

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ABSTRACT

Background: An individual personality is reflected in their thoughts, emotion and behavior. Type D personality is defined as joint tendency towards negative emotions and social inhibition. Type D personality is associated with anxiety, depression and psychological stress. The present study is conducted to assess the incidence of Type D personality in the under graduate dental students as they are prone to excessive stress in their education. To study the prevalence Type D personality in first year dental students and to study the various variables associated with type D personality.

Methods: The personality of students was analyzed by using DS 14 questionnaire. Likert scale was used to calculate the personality score. The students scoring high on either or both subscales taking cut off value as 10 was considered as type D.

Results: 15% students had only social inhibition and 7% students had only negative affectivity. 5% students had both social inhibition and negative affectivity. Overall, the prevalence type D personality was found to be 27% among the students of dental college. The type D personality students were significantly associated with habits like alcoholism. **Conclusions:** The early identification of Type D personality can be helpful both for physical and mental wellbeing and we can minimize its impact on health by adopting healthier life style, yoga and meditation, mentorship in early college days, emotional support etc.

Keywords: Type D personality, Alcoholism, Dental students, DS14 questionnaire

INTRODUCTION

Mental health is an essential component of health. There is an important role of psychological and behavior factors in etiology and pathogenesis of various disorders. These factors play a very dominating role in determining personality of an individual.

An individual personality is reflected in their thoughts, emotion and behaviour.² The personality type classification of individuals refers to psychological classifications of different types of individuals. The most well-known of these personalities is type A personality

which includes competitiveness, aggressiveness, impatience, alertness, irritation, ambitiousness, hostility and increased potential for anger. Type A individuals are at increased risk for developing coronary heart disease. The other personalities are type B and type C. Type B personality are procrastinators and type C are assertive.

Recently, a new personality construct, Type D personality has been proposed in which D stands for distress as reflected by the mood status of an individual. Type D personality is defined as joint tendency towards negative affect and social inhibition. The persons with negative affect have characteristic features of negative

emotions towards themselves and others. Such persons have the tendency to experience negative emotions like depression, low mood, anger, anxiety, stress and hopelessness, etc. Those people scoring high on negative affect are not only dysphoric, but also have negative views about self, future, world, and present many somatic symptoms.³

In contrast, the social inhibition is an avoidance of potential dangers involved in social interacting situations. They fell uncomfortable, shy, tense, and inhibited while interacting with people.³ They tend to experience difficulty in expressing themselves in social situations and result in social inhibition.⁴ Hence, people with Type D personality are unable to express the emotions which lead them feeling tense, insecure, and socially uncomfortable.⁵

Type D personality is vulnerability factor for general psychosocial distress that affects physical health status and people are at high risk of developing psychiatric disorders like depression, anxiety, PTSD, panic or phobic disorder. Type D individuals are associated with greater cortisol reactivity to stress. Elevated cortisol may be mediating factor in the association between type D personality and the increased risk for coronary heart disease and possibly other medical disorders. Type D personality has been linked to a wide range of adverse health outcome like cardiovascular disease and stroke. Type D is further associated with occupational problems such as an increased rate of sick leave, job stress and burn out. See health outcome like cardiovascular disease and stroke.

The medical and dental students are confronted with significant academic, psychological or existential stress. They face difficulties like long study hours, language related problems, home sickness while living in hostel, feeling of loneliness etc. The prevalence of type D personality in Indian medical students is found to be in range of 30-70% in various studies. But, very few studied have found out prevalence and associated factors of type D personality among dental students. Therefore, the current study aims to find our prevalence of type D personality among dental students in a private dental college of western Uttar Pradesh.

Objectives

- To find out the prevalence of type D personality among dental students of a dental college of western Uttar Pradesh.
- To find out the associated factors along type D personality among dental students of a dental college of western Uttar Pradesh.

METHODS

A cross sectional study was conducted among 1st year dental students of a private dental college in western Uttar Pradesh. All students of 1st year i.e., 100 students

were enrolled in the study. The study was conducted during October-November 2018 after taking permission of institutional ethical committee. Each eligible subject was well explained about the purpose of the study by the investigator and an informed consent was obtained, prior to inclusion. Students known to hypothyroidism or diabetes were excluded from the study. Students who were on antihypertensive drugs, anticonvulsants or corticosteroids were excluded from this

The study used DS 14 questionnaire to find out personality type of students. This tool was developed by Denollet (2005) and established as valid and reliable instrument both in clinical sample and general population. Questions 2,4,5,7,9,12,13 measured negative affectivity and questions 1,3,6,8,10,11,14 measured social inhibition (Table 1). The scoring of the questions was done by using Likert scale (five point scale; where 0=false, 1=mostly false, 2=neutral, 3=mostly true, 4=true). Those scoring high on either or both subscales taking cut off value as 10 was considered as Type D (Table 1).⁴

The data was entered into Microsoft-Excel 2007 and after cleaning it was subsequently analyzed using SPSS 19.0. Results were expressed as percentages and proportions. Chi-square test was applied to test gender difference in perceived quality and satisfaction among study subjects. P value less than 0.05 was considered statistically significant.

RESULTS

Out of total 100 students, 71 students were female and 29 students were male. The age of 75 students were between 18-20 years whereas age of 25 students was in the range of 21-23 years. Most of the students (94) were resident of urban areas. 24 students belonged to lower middle class, 46 students belonged to upper middle class and 30 students belonged to upper class. Out of total students, 23 students were drinkers and 24 were smokers. The various sociodemographic details of students are described in Table 2 in detail.

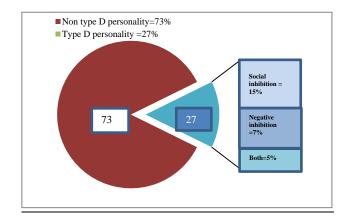


Figure 1: prevalence of type D personality among the dental students.

Table 1: DS 14 questionnaire.

Negative affectivity questionnaire	Social inhibition questionnaire
Q2 I often make a fuss about unimportant things	Q1 I may contact easily when I meet people
Q4 I often feel unhappy	Q3 I often talk to strangers
Q5 I often get irritated	Q6 I often feel inhibited in social interactions
Q7 I have a gloomy view of things	Q8 I find it hard to start a conversation
Q9 I am often in a bad mood	Q10 I am a closed kind of person
Q12 I often found myself worrying about something	Q11 I would rather keep other people at a distance
Q13 I am often down in the dumps	Q14 When socializing I do not find the right things to talk

Table 2: Socio-demographic variables of study subjects.

Variable	Criteria	Frequency (%)
A go (in voorg)	18-20	75
Age (in years)	21-23	25
Sex	Male	29
	Female	71
Locality	Urban	94
	Rural	6
Religion	Hindu	89
	Muslim	8
	Others	3
Type of family	Nuclear	65
	Joint	35
Socioeconomic status	LMC	24
	UMC	46
	UC	30
Alcohol	Yes	23
	No	77
Smoking	Yes	24
	No	76
Hosteller/ Day	Hosteller	73
scholar	Day scholar	27

15% students had only social inhibition and 7% students had only negative affectivity. 5% students had both social inhibition and negative affectivity. Since, students scoring high on either or both subscales were considered as Type D therefore the prevalence type D personality was found to be 27% among the study subjects (Figure 1).

There was a statistically significant association between drinking status of students and type D personality (Table 3) which indicated that the students with typed personality are more prone to drinking alcohol. The association of type D personality and other variables like age, sex, socioeconomic status, religion, family type, residential status and smoking habits were not found significant.

Table 3: Association of Type D personality with alcohol consumption of students.

Alcohol	Type D	Non type D	Chi Square	P value
Yes	12	11	9.604	0.001942
No	15	62	9.004	

DISCUSSION

In the present study, 15% students had only social inhibition and 7% students had only negative affectivity. 5% students had both social inhibition and negative affectivity. Since, students scoring high on either or both subscales were considered as Type D therefore the prevalence type D personality was found to be 27% among the study subjects. Khan et al (2017) also reported that prevalence of type D was 39.6% among college going students of Delhi. 10

In addition of this, Williams 1 et al (2008) reported that the prevalence of type-D was found to be 38.5%, significantly higher in UK and Ireland than that reported in other European countries. In addition, type-D individuals reported performing significantly fewer health-related behaviors and lower levels of social support than non-type-D individuals. In a study conducted by Lapyte et al (2015) the prevalence of type D personality was 31.57% among medical students of Lithuania and Belgium. In the prevalence of type Lithuania and Belgium.

On the contrary, Gupta et al in under graduate medical students from Midnapore medical college, West Bengal Type D personality was present in 70% students. 12 15.3% students had only negative affectivity, 23.3% students had only social inhibition and 31% students had both the components of Type D personality. The reason for higher prevalence in their study as compared to our study could be because of lesser stress in dental students as compared to medical students.

Similarly, Rishi et al conducted a study in women in Jalandhar city, Punjab, in their study, social inhibition was observed in 72% of participants, negative affectivity in 71% and type D personality was found in 72%. ¹³ The reason for higher prevalence of personality D in their study as compared to ours could be because of the fact that their study was done only in women population and depression is more prevalent in women.

Therefore, it can be inferred that the prevalence of type D personality is quite variable across the various regions. The variability in type D personality is due to reason that the multiple factors play important role in personality development. The stress, depression is some of the

important factors which are associated with type D personality students across the various studies.

It has been observed that type D personality individuals are at high risk of developing psychiatric disorders like depression, anxiety, panic or phobic disorder, cardiovascular disorders. Therefore, instead of studying the association of type D personality and variables like depression, the present study had focused on studying the association of type D personality and variables like smoking, drinking among students.

The present study has identified a statistically significant association between Type D personality and alcohol consumption in the students. Bruce et al showed that Type D individuals were motivated to drink alcohol in order to cope with their negative emotions. Williams et al reported Type D individuals exhibited significantly higher levels of desire for alcohol during the acute stress and recovery phases, compared to non-type D individuals. Williams et al suggested that type D individuals might be motivated to consume alcohol in order to cope with stressful situations. Therefore, type D dental students should be provided more emotional and psychological supports to prevent depression and alcoholism among them.

The various factors like smoking, residential status, socioeconomic status of students were not found to be significantly associated with type D personality. Khan et al also observed that there was no significant association between type D personality and whether students stayed at home with parents or in hostels or paying guest accommodation. ¹⁰ Khan et al also observed no significant association between type D personality and type of courses perused by students. ¹⁰

CONCLUSION

The personality cannot be changed but if these traits are recognized we can not only minimize risk on health aspect, but also cam improve their quality of life significantly type D personalities are emotional labile and they face difficulty in social relationships. Type D personalities are more likely to experience anxiety and depression type D personality had shown association with drinking alcohol. Therefore, type D personality students require good counselling and mentorship during college period. Type D personalities students are required to adopt healthier lifestyle such as better diet and regular exercise. They need counselling to conquer addictions such as smoking or alcohol abuse. These students should try techniques such as guided imagery, breathing exercises, tai chi, yoga and meditation to help relieve stress and mood and can learn to control anger and hostility. This may help the young students to overcome their difficulties and lead healthier life and are required to adopt healthier lifestyle such as better diet and regular exercise. They need counselling to conquer addictions such as smoking or alcohol abuse. These students should try techniques such as guided imagery, breathing exercises, tai chi, yoga and meditation to help relieve stress and mood and can learn to control anger and hostility. This may help the young students to overcome their difficulties and lead healthier life.

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