

Study on Incidence of Type D Personality among Under Graduate Medical Students

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Abstract:

Background: Distressed personality commonly referred as type D personality is characterized by negative attitude towards life combined with person's preference to suppress their emotions. It is associated with anxiety depression and psychological stress. It is one of the risk factor for coronary heart disease. The present study is conducted to assess the incidence of Type D personality in medical under graduate students who are prone to excessive stress in their education.

Aim and objective: Study of Type D personality in second year medical students.

Material and methods: 14-item questionnaire was given to the students and information was collected. Likert scale was used to assess the incidence of type D personality. The results were analyzed using suitable statistical methods.

Results: Among the study population 55.3% had negative affectivity (NA) and 76.3% had Social Inhibition (SI). Significant association between NA and SI was observed. If the score of both NA and SI is 10 or more they were considered under Type D personality.

Conclusion: 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, breathing exercises, yoga, interpersonal psychotherapy, emotional support etc.

Key words: Type D personality Likert Scale, Social inhibition, Undergraduate students.

I. Introduction

Mental health is regarded as an essential component of health by the World health organization. Many studies have demonstrated the role of psychosocial and behavioral risk factors in the etiology and pathogenesis of cardiovascular disorders.^[1-5] An individual personality is reflected in their thoughts, emotions and behavior, which in turn, influence the health of person.^[6] Personality type refers to psychological classification of different types of individuals. The most well-known of these personalities is type A personality which includes ambitiousness, aggressiveness, competitiveness, impatience, alertness, irritation, 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^[7-9]. D stands for distress as reflected by the mood status. Mood plays a mediating role in the relation between stressful events and cortisol secretion^[10,11,12]. Negative affect and agitation was associated with higher cortisol levels. The prevalence of Type D personality is 21% in the general population^[13]. The incidence in cardiac patients is still higher ranging up to 53%.^[14] 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 outcomes^[15,16].

Type D personality is defined as the joint tendency towards negative affect and social inhibition. Negative affect means people have negative emotions towards themselves and others. They tend to experience difficulty in expressing themselves appropriately in social situations and this results in social inhibition. E.g. Reticence and lack of self-assurance. Type D personality is a vulnerability factor for general psychological distress that affects physical health status. Type D is associated with poor physical health^[17,18] higher cardiac morbidity and higher mortality rate compared with patients with other personality types^[19]. Type D personality has deleterious effect on the prognosis of patients with coronary heart disease and two fold increase in mortality is reported in non fatal MI^[20,21].

Undergraduate medical education comprises strenuous study and training for 6 years. The curricular objectives are dynamic due to expanding knowledge and evolving therapies. During this period medical students acquire adequate professional knowledge, skill and attitudes in order to prepare themselves to deal with lifelong

professional challenges independently. These demands of learning and training might adversely affect the student physical and mental health. It has been reported that medical students consequently suffer from depression, anxiety, and stress after commencing their medical education. The completion for getting post graduate training and job opportunities could be an additional trigger for psychological illness. Yusoff et al have previously reported that healthy students develop depression and stress after commencing their medical education.

Type D individuals are characterized by high scores on the two stable personality traits i.e. negative affectivity and social inhibition. However Type D personality is considered to be a relatively stable, non-psychological character trait and distinct from mental illness like depression^[22,23]. Thus researchers have investigated the relation between Type D and various psychological problems including depression, anxiety and posttraumatic stress disorder^[24,25]. Type D is further associated with occupational problems such as an increased rate of sick leave, job stress and burn out^[26,27].

II. Materials And Methods

A total of 152 undergraduate medical students of IInd MBBS of Sri Venkateswara Medical College, Tirupathi were selected. Informed consent was taken from each participant after explaining the objectives of the study. Students known to hypothyroidism or diabetes were excluded from the study. Students who were on antihypertensive drugs , anticonvulsants or corticosteroids were excluded from this study.

Type D personality can be assessed by means of valid and reliable 14-item questionnaire based on DS-14. Each of them was presented with one copy of questionnaire to assess the type –D personality (DS 14). In Type D scale (DS-14) 7 questions refer to negative affectivity and other 7 questions refer to Social Inhibition. Likert scale, which is a 5 point scale; where 0=false, 1=rather false, 2=neutral, 3=rather true, 4=true. The question numbers 2, 4, 5, 7, 9, 12, 13 refers to negative affect and question numbers 1, 3, 6, 8, 10, 11, 14 refers to Social inhibition. Those scoring high on both or either subscales taking cut off value as 10 or >10 was considered as type D personality. The data was collected and analyzed subsequently. All the data were tabulated.

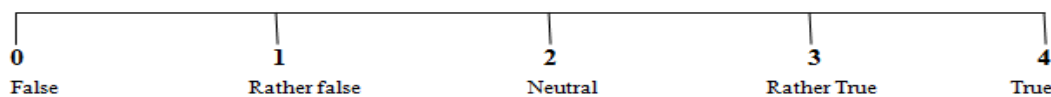
Table :1 :- Negative Affectivity Questionnaire

Q2 I often make a fuss about unimportant things
Q4 I often feel unhappy
Q5 I often get irritated
Q7 I have a gloomy view of things
Q9 I am often in a bad mood
Q12 I often found myself worrying about something
Q13 I am often down in the dumps

Table :2:- Social Inhibition Questionnaire

Q1 I may contact easily when I meet people
Q3 I often talk to strangers
Q6 I often feel inhibited in social interactions
Q8 I find it hard to start a conversation
Q10 I am a closed kind of person
Q11 I would rather keep other people at a distance
Q14 When socializing I do not find the right things to talk

Likert Scale

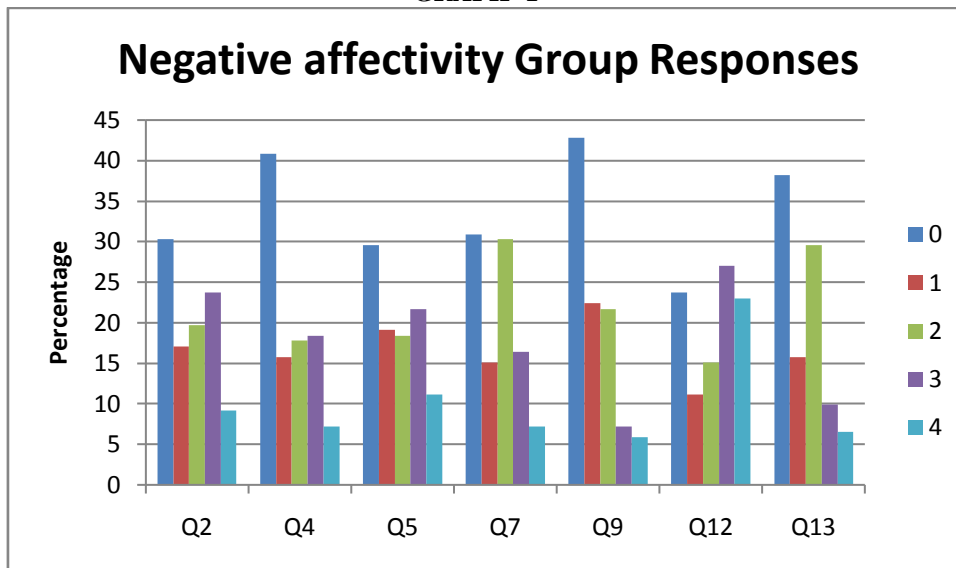


III. Results

TABLE :3:- Results of Questionnaire Regarding Negative Affectivity

	Q2	Q4	Q5	Q7	Q9	Q12	Q13
0	30.3	40.8	29.6	30.9	42.8	23.7	38.2
1	17.1	15.8	19.1	15.1	22.4	11.2	15.8
2	19.7	17.8	18.4	30.3	21.7	15.1	29.6
3	23.7	18.4	21.7	16.4	7.2	27	9.9
4	9.2	7.2	11.2	7.2	5.9	23	6.6

GRAPH -1

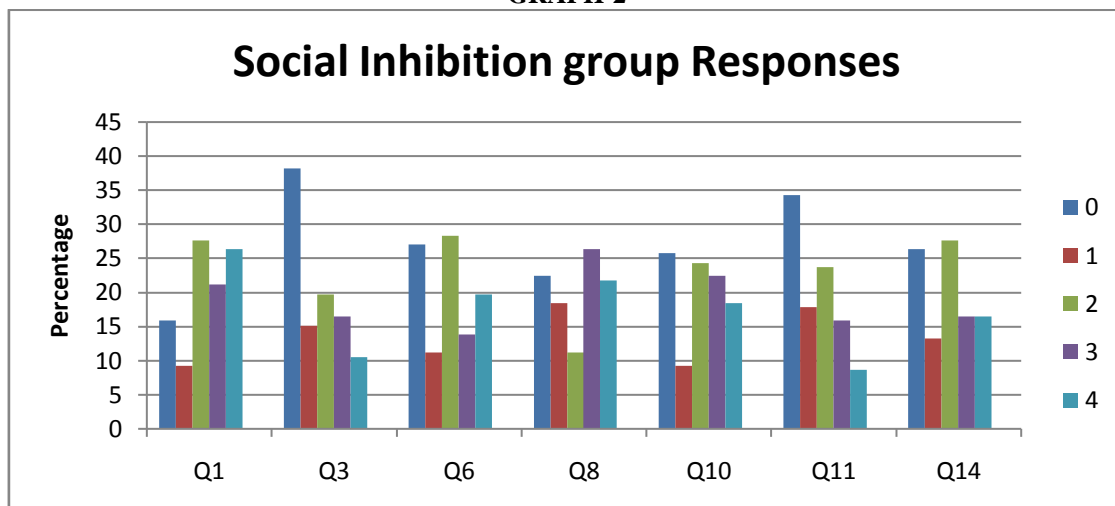


Above chart shows responses of negative affectivity group. 30.3% of the students were of the opinion that they do not make a fuss about unimportant things. 40.8% of the students opined that they were happy. 29.6% say that they were not often irritated. 30.9% students say that they have no gloomy view of things and 30.3% are neutral. 42.8% were often not in a bad mood. 23.7% of them say they often found worrying about something. 38.25% were not thinking that they often found in the dumps.

TABLE: 4:- Results of Questionnaire Regarding Social inhibition

	Q1	Q3	Q6	Q8	Q10	Q11	Q14
0	15.8	38.2	27	22.4	25.7	34.2	26.3
1	9.2	15.1	11.2	18.4	9.2	17.8	13.2
2	27.6	19.7	28.3	11.2	24.3	23.7	27.6
3	21.1	16.4	13.8	26.3	22.4	15.8	16.4
4	26.3	10.5	19.7	21.7	18.4	8.6	16.4

GRAPH-2



Graph-2 shows responses of social inhibition group. 27.65% of students say that they were neutral when they meet people and 26.3% say they may contact easily. 38.2% doesn't like to talk to strangers. 28.3% say they were neutral in social interactions and 27% felt they were inhibited in social interactions. 26% of the students find it hard to start a conversation. 25.7% felt they were a closed kind of person and 24.3% said they would rather keep other people at a distance. 60.4% says they do not find the right things to talk.

TABLE :5:- Incidence Of Negative Affectivity

	Frequency	Percent	Valid Percent	Cumulative Percent
absent	68	44.7	44.7	44.7
present	84	55.3	55.3	100
Valid Total	152	100	100	

Graph-3 Incidence Of Negative Affectivity (Na) In Students Population.

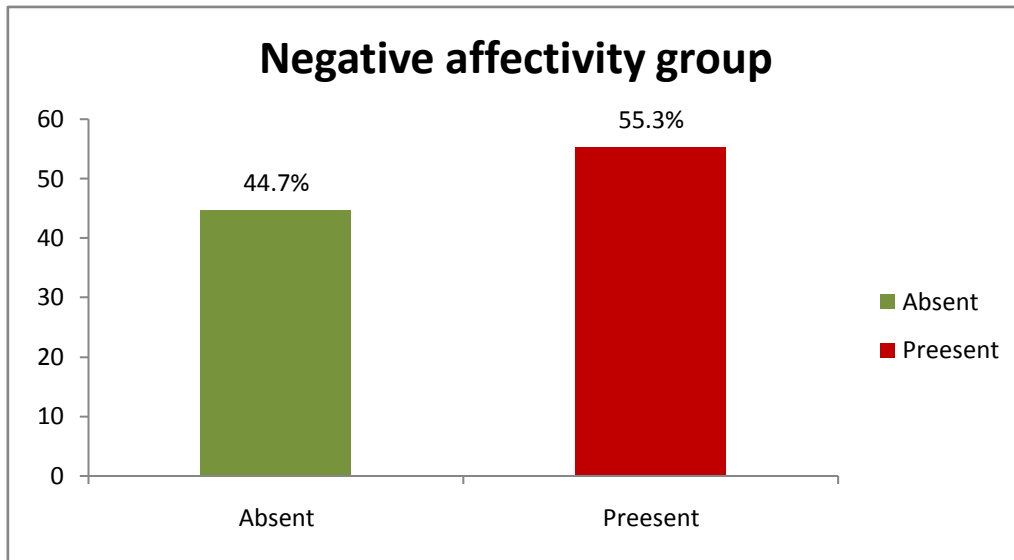


Table: 6:- Incidence Of Social Inhibition

	Frequency	Percent	Valid Percent	Cumulative Percent
Absent	36	23.7	23.7	23.7
Present	116	76.3	76.3	100
Valid Total	152	100	100	

GRAPH-4 : Incidence Of Social Inhibition (SI) In Students Population.

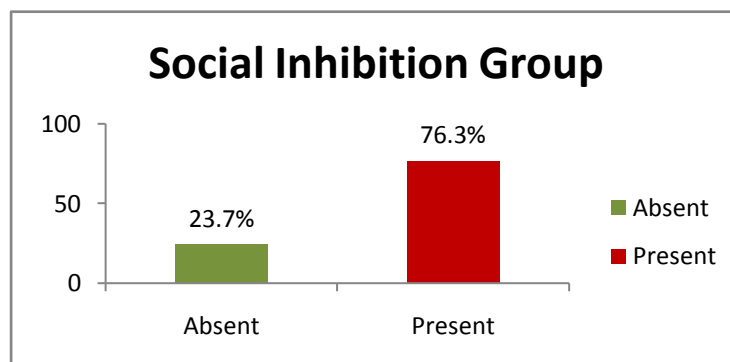


Table- 7 Statistical Analysis

Chi-Square Tests					
	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	17.475 ^a	1	.000	.000	.000
Continuity Correction	15.908	1	.000		
Likelihood Ratio	17.844	1	.000	.000	.000
Fisher's Exact Test				.000	.000
N of Valid Cases	152				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 16.11.

b. Computed only for a 2x2 table

p value is less than 0.001. So it is highly significant. There is a significant association between NA and SI groups.

IV. Discussion

Type D scale DS 14 have been shown to be valid and reliable measure of psychiatric symptoms. It is associated with increased symptoms of anxiety and depression on socio demographic and clinical risk factors [28]. Type D individuals are known to experience hostility, anxiety, anger, depressed mood, tension and negative views of themselves. Type D individuals are unable to express the emotions which lead them feeling tense, insecure and socially uncomfortable. In the present study 55.3% of study population had negative affectivity and 44.7% shows absence of negative affect (Table-5, Chart-3).76.3% had social inhibition and 23.7% do not show social inhibition.(Table-6, Chary-4). p value is less than0.0001, so it is highly significant.(Table-7). They had one or both the components of type D personality. In relation to depression it was found that Negative affect is more significantly related than Social inhibition [29]. An important finding as studies revealed that the prevalence of cardiac events in persons who score high in Negativeaffect but not in Social inhibition. Thus early identification of subject with type D personality can be helpful both for his/her physical mental wellbeing. Recently it was found that type D personality is associated with depression in parents of children with leukemia [30]. Also studies reports indicate that the patients with type D personality rarely receive regular health checkups [31] or treatment. [32]

V. Conclusion

The personality cannot be changed but if these traits are recognized we can minimize risk on health aspect. Type D personalities are more likely to experience anxiety and depression these can be managed to a significant level with counseling and medication. Other methods are adopting healthier lifestyle such as better diet and regular exercise, participating programs or counseling to conquer addictions such as smoking or alcohol abuse or to improve social skills and learn to relax. Using techniques such as guided imagery, breathing exercises, medication, tai chi and yoga to help relieve stress and mood and learn to control anger and hostility. This may help the young medicos to overcome their difficulties and lead healthier life.

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