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PREVALENCE OF TYPE A AND TYPE B PERSONALITY AMONG STUDENTS OF PUBLIC MEDICAL SCHOOLS: A MULTI-CENTER CROSS-SECTIONAL STUDY

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ABSTRACT

Objective: TO find out the prevalence of Type A and Type B personality among the MBBS students of Public Medical Schools, and the association between academic year and personality type. **Methods:** A descriptive cross-sectional study was conducted at Public Medical Schools in Lahore, Sargodha, Karachi, Hyderabad, Hattiesburg, and Nnewi from April 2019 to May 2019 among 1000 sample size. 200 students from each MBBS year were inducted by a simple random sampling technique. After taking consent from the institute and students, data was collected on BECK Anxiety Inventory (BAI) questionnaire. According to the BAI scale, students were Identified as type A or B personality. Data were analyzed using SPSS version 20. To find the association between student year and personality type, the Chi-square test of significance with 95% confidence level was performed. **Results:** First, second, third, fourth, and final year students have 8(0.8%), 12(1.2%), 22(2.2%), 29(2.9%), and 37(3.7) type A personality respectively. Among all the study participants (n=1000), the total number of type A was 108 (10.8%). Association between student year and personality type was significant (p=0.050) at 95% confidence level. **Conclusion:** The study results indicate that there is a significant association between academic year and type A personality. There was a gradual increase in the number of type A personality students from 1st year to final year in public medical schools.

KEYWORDS: MBBS, BAI questionnaire, personality type.

INTRODUCTION

Friedman and Rosenman described Type A and Type B personality in 1974. Since then professionals have begun to examine the relationship between the types and many variables including the CAD (coronary artery disease).[1] Friedman and Rosenman described Type A behavior patterns as characterized by individuals who are hard-driving, impatient, time urgent, competitive, aggressive, striving, achievement-oriented and hostile, perceiving environmental events as being particularly challenging, threatening or stressful.[2]

The less tense and less compulsive type B personality is characterized by moderate unhurried, pleasant speech patterns, moderately-paced walking, and eating speed, adequate self-esteem, and realistic self-expectations. Goals are realistic and less demanding. There is a lack of time urgency, hostility and insecurity.[3]

They are engaged in a struggle to achieve maximal number of goals in the minimum amount of time. Because of these traits, Type A personality is extremely vulnerable to failure. Type B personalities are far more realistic. They are good at realistic self-appraisal and

remain self -confident given their acknowledged limitations. Unlike Type A's, the type B personality does not exhibit a habitual sense of time urgency or free-floating hostility. Type B personality is unlikely to display nervous tics such as hand clenching, knee juggling (Friedman and Ulmer 1984). Friedman and Rosenman studied Type A personality and its relationship to coronary heart disease. They believe that the 20th century has contributed to an increase in Type A behavior.

Personality Disorder is a prevalent condition and it also has an association with Hypertension, heart disease, and depression. Limited research is available regarding personality disorder's association with comorbid conditions. If appropriately and timely intervention regarding behavior patterns is done, the risk of coronary artery disease can be substantially reduced.

To assess the presence of type A personality, several researchers have used impatience, anger, work involvement, time urgency, job dissatisfaction, and competitiveness grades.[4] According to research conducted in the USA, the prevalence of personality disorders (PD's) was 13.2% (SE,0.7).[5]

We should assess the number of Type A personalities in our set up and should collect information from medical colleges regarding behavior patterns of MBBS students. The importance of work as self-identity begins in childhood swagger[3](1986) notes that type A and aggressive behaviors may be learned by children through parental modeling and through behaviors that communicate love and acceptance only if the child is successfully competitive and achievement-oriented. As medical professionals are considered healers of the community so they must be mentally healthy. But because of the constant stress of medical education, future doctors are under significant stress. So, there is a need to evaluate their psychological health and personalities. Moreover, the medical students are future remedial personnel and if they are not mentally healthy, it would not be possible for them to work efficiently. So in medical schools, there should be awareness programs regarding Type A behavior patterns and its negative health effects. This data may help later on to find the relation between type A personality and CAD.

METHODS

A descriptive cross-sectional study was conducted at Public Medical Schools in Lahore, Sargodha, Karachi, Hyderabad, Hattiesburg, and Nnewi, for 2 months duration from April 2019 till May 2019. One thousand sample size calculated by the WHO sample size calculator with a confidence level of 95% anticipated population proportion of 0.132 and absolute precision of 0.33. Verbal informed consent from students and permission from the ethical committees of medical schools was taken. About 200 students from each MBBS year were inducted by probability simple random technique (lottery method). A sampling frame (list of students from 1st-year MBBS to 5th-year MBBS) was obtained from the schools' administration. Data was collected on the BECK anxiety inventory (BAI)[12] questionnaire. According to criteria laid down by the BECK interpretation scale, students were scaled as follows (Table 1). The score of 26 and above was defined as Type A personality while a score of 25 and below was diagnosed as a Type B personality. After filling of questionnaires from students, they were diagnosed as either having Type A or Type B personality. Data was entered and analyzed using statistical package for Social science (SPSS) version 20. Qualitative data including variables such as MBBS year and type of personality are presented in the form of frequencies, percentages, graphs, and pie-charts. Chi-square test of significance with a 95% confidence level is used to find an association between MBBS student year and personality type.

RESULTS

Among all the study participants (n=1000), the total number of type A and type B were 108(10.8%) and 892(89.2%) respectively as shown in Table-ll. First-year had 8(0.8%) type A personality students and 192(19.2%) type B personality students. Second-year had 12(1.2%) type A and 188(18.8%) type B personality students. The third-year students had 22(2.2%) type A and 178(17.8%) type B. Fourth-year had 29(2.9%) type A and 171(17.1%) type B personality students. The fifth-year had 37(3.7%) type A and 163(16.3%) type B personality students. Association between students year and personality type was significant (p=0.05) at 95% confidence level as shown in Table 2.

Table I: BECK Interpretation scale.

Range of Scores	Anxiety level
0-7	Minimum Anxiety Level
8-15	Mild Anxiety
16-25	Moderate Anxiety
26-63	Severe Anxiety

Table-II: Frequency of type A and B personality among.

Student's year	Type A n (%)	Type B n (%)
1st year MBBS	8(0.8)	192(19.2)
2nd-year MBBS	12(1.2)	188(18.8)
3rd-year MBBS	22(2.2)	178(17.8)
4th-year MBBS	29 (2.9)	171(17.1)
5th-year MBBS	37(3.7)	163(16.3)

Medical Students (n=1000) (p=0.05).

STRENGTH OF STUDY

The strength of our study was that we targeted every year of medical students. The students were selected by a simple randomized technique which increased the validity of the study as selection bias was reduced to a substantial level. This was a medical school-based study and specifically targeted the undergraduate medical students with a recent state of mind so Berkisonian bias, or recall bias has been reduced altogether.

LIMITATION OF STUDY

An important limitation was that we did not assess their socioeconomic status or sex (Male/Female) which would have enlightened the association between socioeconomic status or sex (M/F) and Type A personality.

One more limitation is the subjective nature of the instruments since responses to the questions depend on the respondent's perception of "self".

DISCUSSION

If undergraduate medical students are divided into type A and Type B personalities, who are more likely to develop CAD? It is necessary to examine the association between personality type and CAD.

One thousand students were evaluated for behavior patterns and increasing pattern of Type A personality was seen year-wise. This is a concerning issue which must be thought into as many studies have concluded a positive relationship of type A personality and coronary artery disease.

Different studies were conducted among patients of heart disease (CAD, myocardial infarction, and Hypertension).[13] One of these studies showed a significantly greater proportion of Type A patients had at least one artery with a clinically significant occlusion of 75% or greater.[6] Another study showed an association of Type A with Myocardial infarction. A study of Type A and Type B personality and burn out in nurses was conducted in san Jose state university and concluded that there is a high degree of stress and burn out in nurses having Type A behavior.[7] Another study in Army medical college Rawalpindi conducted in 2013 showed a graded increase in Type A from 1st to final year.[8]

Several studies showed that the prevalence of personality disorder (PD's) is higher among high school students and mostly in female students. And its number is higher in doctoral students that have spent 6-10 years in their studies.[9] One more study showed that a subgroup of Type A individuals is disliked by their Co-workers.[10] We did not include the elements of relationship with other colleagues in our study objective and it is a very important aspect of the medical profession. A case-control study in China found that the proneness of accidents is more among TABP. Type A behavior causes high-stress levels and can be moderated through exercise.[11] So, our study is very beneficial for future research and may act as a data source to find association between CAD, hypertension, depression, and Type A personality.

CONCLUSION

The study results indicate that there is a significant association between academic year and type A personality. There was a gradual increase in the number of type A personality students from 1st year to final year in public medical schools. Awareness programs should be organized by the psychiatric department of medical schools so that the students, having this minor mental health issue can be psychosocially rehabilitated and encountered timely.

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