

Study Of Prevalence and Nature of Psychological Disturbances in Adolescents Attending Junior College in The Semi-Rural Area

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ABSTRACT

A cross sectional survey was conducted initially followed by a prospective cohort study was undertaken to explore the prevalence and nature of psychological disturbance in the adolescents attending junior college in the semi-rural area of Palghar-Boisar. Also, the study includes the understanding of homoeopathic correspondence for the psychological disturbances prevalent.

Random selection of three colleges was considered for the study including both science and commerce stream of both sexes. A survey was conducted with the orientation of the students and teachers in individual college for their approval in the study. Sample selection was done on the basis of positive scoring in GHQ 28 questionnaire. According to Goldberg 's method, individual scoring 4 and above are considered positive for the study.

Total students oriented and attempted questionnaire were 509 students. Of which 250 were positive with scorings 4 and above. Considering the huge sample size, a cut-off point was admitted as 9 and above for exploring the nature of psychological disturbance. The total numbers of students scoring 9 and above were 90 students of the total 250 students. These 90 students were considered highly positive for the study and considered as a sample for undertaking the study. Of which 81 students were screened to explore the pattern of illness. Remaining students showed disapproval for the study.

Various nature of psychological disturbances were explored with the help of the screening tool consisting a list of symptomatology representing various disorders from DSM-IV-TR. The prevalence of various combinations of psychological disturbances was elicited amongst the students. Difference between the students attending science stream and commerce stream was studied individually. Also, the difference between the gender predominance in the affection of psychological disturbances was studied.

A cohort of 43 students was identified with prominent Anxiety state related to exam from the screened 81 students. Homoeopathic intervention was done as per the indication. The predominant remedies which were indicated for the Anxiety state were Aethusa, Kali Phosphoricum, Gelsemium, Lycopodium and Silicea. Prospective study was undertaken to study the remedy response with the specific follow up criteria. Difference in the remedy response before and after taking the homoeopathic medicines was studied.

Homoeopathic correspondence was studied for the remaining 38 students individually. From the 81 students, 10 students volunteered for detail exploration. The pattern and nature of psychological disturbances were studied in detail in them. Homoeopathic correspondence for the nature of psychological disturbances in these cases was Silicea, Natrum Mur, Carcinosis, Natrum Sulphur, Lachesis, Pulsatilla, Arsenic Alb and Tuberculinum.

Comprehensive understanding of all the cases was done with the help of diagnostic net tool from Standardized Case Record. Personality understanding was done with help of Eysenck 's Dimensions of personality with various personality factors. These dimensions were co-related with Homoeopathic concept of temperament. Thus, homoeopathic correspondence was studied with different dimensions of personality and temperament.

KEYWORDS: PSYCHIATRY, ANXIETY DISSORDERS, ADOLESCENCE, SURVEY, HOMOEOPATHY, MENTAL HEALTH

INTRODUCTION

Adolescence is the period from the beginning of sexual maturity (puberty) to the completion of physical growth. A period of transition from childhood to adulthood.⁽³⁰⁾ The World Health Organization has defined "adolescents" as persons in the 10 to 19 year age group.⁽⁷⁾

The period of adolescence is one of rapid growth, change, relocation and self-discovery⁽²⁾ and a phase of life that begins in biology and ends in society.⁽³⁰⁾ This is one of the most enjoyable stages of one's life and it has to be experienced with joy and friendship paving the way for building a healthy society with good social relationships.⁽⁶⁾ These are truly the years of creativity, empathy, idealism and with bountiful spirit of adventure.

Today India has the largest population of adolescents in the world constituted 20 per cent of the world's 1.2 billion adolescents.⁽¹³⁾ India is being home to 243 million adolescent individuals over 1081 million of the total population. This is the generation which will shape India's future. One of the most important commitments a country can make for its future economic, social, and political progress and stability is to address the health and development-related needs of its adolescents.

During this adolescence phase people extend relationships beyond their parents and family. It is a time of intense influence of peers, and the outside world in the society. A desire to experiment and explore can manifest in a range of behaviours exploring sexual relationships, alcohol, tobacco and other substances abuse. The anxiety and stress associated with achievement failure, lack of confidence etc are likely to lead to depression, anger, violence and other mental health problems. Both long-standing and recent social adversities precede and increase the risk for emotional and behavioural psychopathology during the school-age years.⁽²⁾

The lifetime prevalence of depression, anxiety, and stress among adolescents and young adults around the world is currently estimated to range from 5% to 70%⁽²⁶⁾ Indian teens have world's highest suicide rate. Suicidal behaviour amongst adolescent students is a matter of great concern due to the tragic loss of prime years of life it entails. Adolescents in the late stage of adolescence are likely to be experiencing more stress and emotional turmoil as they face the threshold of adulthood. In this period, rising expectations and responsibilities may create pressures for many of them.⁽⁷⁾ A recent survey conducted shows that one in every four collegians suffer from some degree of depression. Fourteen in every 100 had thought about suicide. In 2007 Maharashtra accounted for 12.4% of suicides, the highest in the country. The youth had listed family pressure as the biggest weight on their shoulders. Peer pressure and academics followed.⁽¹⁵⁾

Despite the multitude of factors which can influence the development of adolescents, their mental well-being is crucial. Adolescents must learn how to cope with psychological stress, handle peer pressure, deal with their emotions, resolve conflicts, build bridges with friends and family, develop self-confidence, safeguard themselves from high pressure as well as cope with other stresses like academic competition.

Considering the large number of adolescents in our country, the study thus evokes an urgent need to stimulate an action to identify those at risk and those who need treatment among the adolescent student populace. The evidence in literature from cross-cultural studies both supports and challenges the hypothesis that adolescence is a difficult period in development.

Thus, the need of study was to give greater understanding about the special/sensitive needs and visibility to the adolescent as a crucial segment of the population existing in India. Also, to understand the pattern of psychological disturbances which occur at this age. Adolescents are full of energy, have significant drive and new ideas. They are a positive force for a Nation and are responsible for its future productivity provided they develop in a healthy manner.

MATERIALS & METHODS

Sources of data

Students attending the junior college in the semi-rural area of Palghar-Boisar. A representative sample is taken from the college for the study.

Inclusion Criteria

Junior college students from science and commerce stream of both sexes.

Exclusion Criteria

Students from arts stream.

Method of collection of data

A cross sectional survey was conducted amongst the adolescents attending junior college to explore the prevalence and nature of psychological disturbances followed by a prospective cohort study to examine the efficiency of homoeopathic intervention in exam related anxiety state.

- Random selection of three colleges were selected from Palghar-Boisar. A-college, B-college and C-college.
- Approached the Principal and managements of respective colleges and explained the aims and objectives behind the studies.
- Permissions were signed to undertake the study in the college premises.
- Teachers of the individual colleges were oriented regarding the process of study and the beneficial effects to the students.
- GHQ 28 questionnaire was administered to all the students after attending the orientation programme. (Annexure-A)
- Feedbacks were taken from the student after filling up the questionnaire in written with suggestions.
- Analysis of the GHQ 28 questionnaire was done using Goldberg's method. Students scoring 4 and above points are considered to be positive for the study. (Richard et. al.,1755) As the sample size was large, 9 and above points were considered as a cut-off point. (Alastair et.al., April 1987)
- Students whoever scored positive 9 and above points in the GHQ 28 questionnaire were selected as a sample for study.
- Positively scored students were further screened with the help of screening tool (Annexure-B) consisting of symptomatology list prepared from DSM-IV-TR to explore the nature of psychological disturbance and to study the homoeopathic correspondence.
- Homoeopathic medicines were prescribed for exam related anxiety to overcome the state as per the need of an individual student and follow ups taken individually with the specific criteria.
- Volunteer students scoring positive in the questionnaire was defined for further exploration of the psychological disturbance. Homoeopathic correspondences for such cases were studied.

RESULTS & DISCUSSION

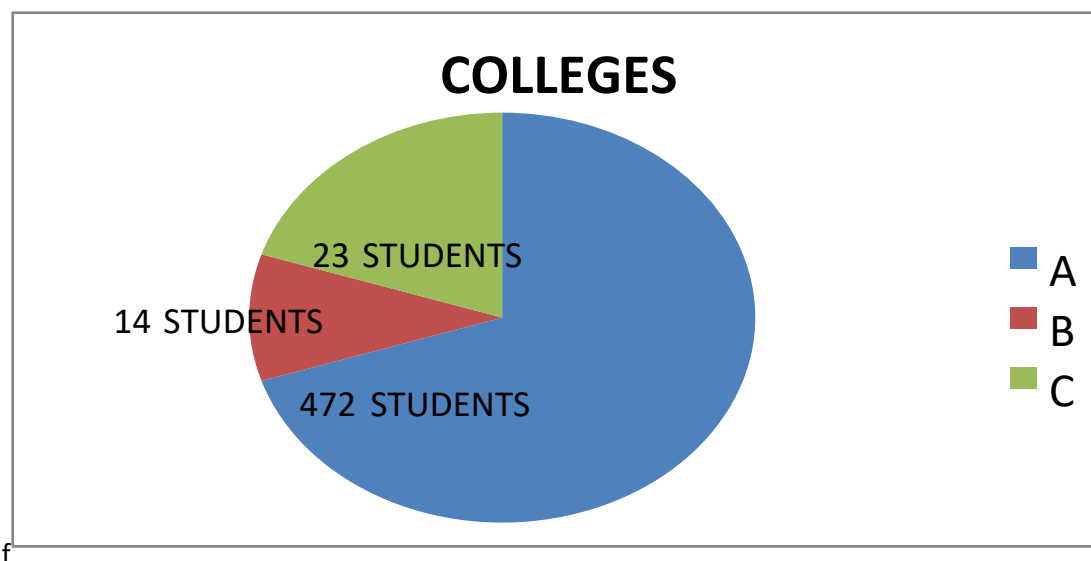


Fig No.1 STUDENTS IN THE INDIVIDUAL COLLEGES

COLLEGE	STD	SCIENCE	COMMERCE	TOTAL
A	11 TH	103	-	103
	12 TH	207	162	369
B	12 TH	23	-	23
C	12 TH	-	14	14
TOTAL		333	176	509

Table No.1 STRENGTH OF EACH COLLEGE

Total of about **509 students** attempted the questionnaire and given feedback regarding the concept understanding and also mentioned about their individual difficulties.

Analysis of GHQ 28 questionnaire

The individual who scores 4 points and above is positive for the study and considered to be having some kind of psychological disturbance.

COLLEGE	SCIENCE	COMMERCE	TOTAL
A	134	86	220
B	19	-	19
C	-	11	11
TOTAL SAMPLE	153	97	250

Table No. 2. GHQ POSITIVE SCORING

Out of 509 students screened, 250 students scored positive for GHQ 28 questionnaire. From the whole sample, the **percentage of overall prevalence of is 49%**. Almost half of the sample is suggestive of having psychological disturbances.

Prevalence Rate in different colleges

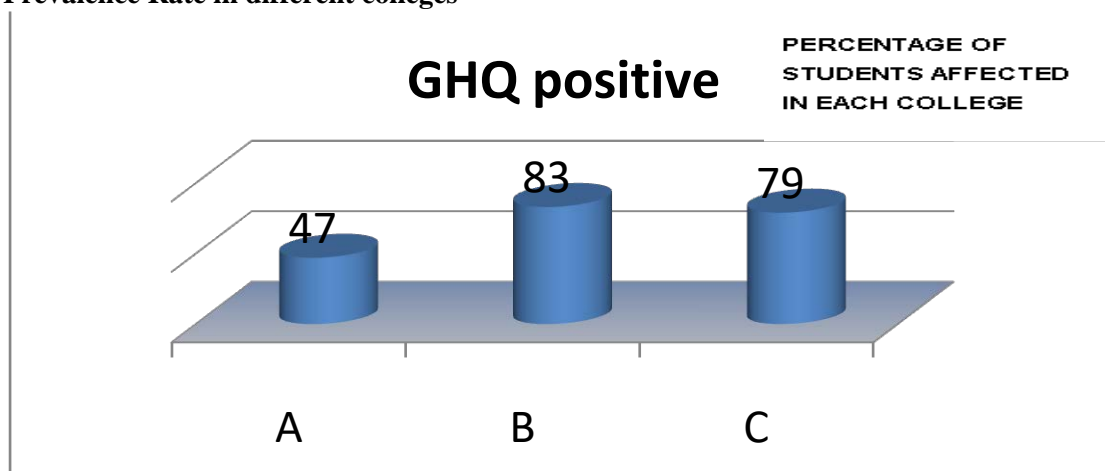
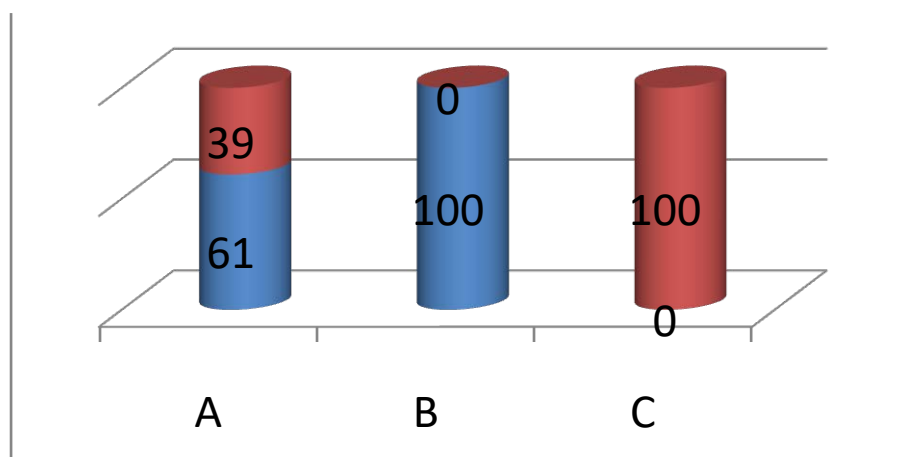


Fig No.2. GHQ POSITIVE STUDENTS IN PERCENTAGE

Students scoring 4 and above are estimated in each college. B college shows a higher prevalence of 83%, C college shows 79% and A- college shows 47%.

Prevalence Rate of psychological disturbances in science and commerce students in individual college



**Fig.No.3 PREVALENCE RATE OF PSYCHOLOGICAL DISTURBANCE
IN INDIVIDUAL COLLEGE**

COLLEGE	SCIENCE	COMMERCE	TOTAL
A	41	35	76
B	8	-	8
C	-	6	6
TOTAL SAMPLE	49	41	90

Table No.3. PREVALENCE GHQ 28 POSITIVE 9 POINTS AND ABOVE

The total no. of students with high prevalence rate is **90 students** of 9 points and above out the total 250 students of actual prevalence. 41 science students and 35 commerce students from A-college. B-college does not have commerce students. The sum of 8 students are scoring positive for study. C- college does not have science students. There are 6 students who are scoring positive for the study.

Prevalence of various Psychological disturbances

With the help of the screening tool consisting of the list of symptomatology from DSM-IV-TR, the nature of psychological disturbance was studied. The list consists of various symptoms from the text enlisted in different mental disorder. The screening was aimed to get a nature of psychological disturbances present in the students irrespective of any specific diagnosis. Students presented with various pattern of illness on screening in different combinations.

Various mental disorders mentioned in DSM-IV-TR and the prevalence of psychological disturbances available in the students screened as per the criteria of mental disorders

- A.** Depression
- B.** Mania
- C.** Panic attack
- D.** Specific phobias
- E.** Obsessive compulsive disorder
- F.** Post traumatic stress disorder
- G.** Generalized anxiety disorder

- H. Somatization
- I. Attention deficit hyperactive disorder
- J. Impulse control disorder
- K. Psychotic disorder
- L. Substance abuse

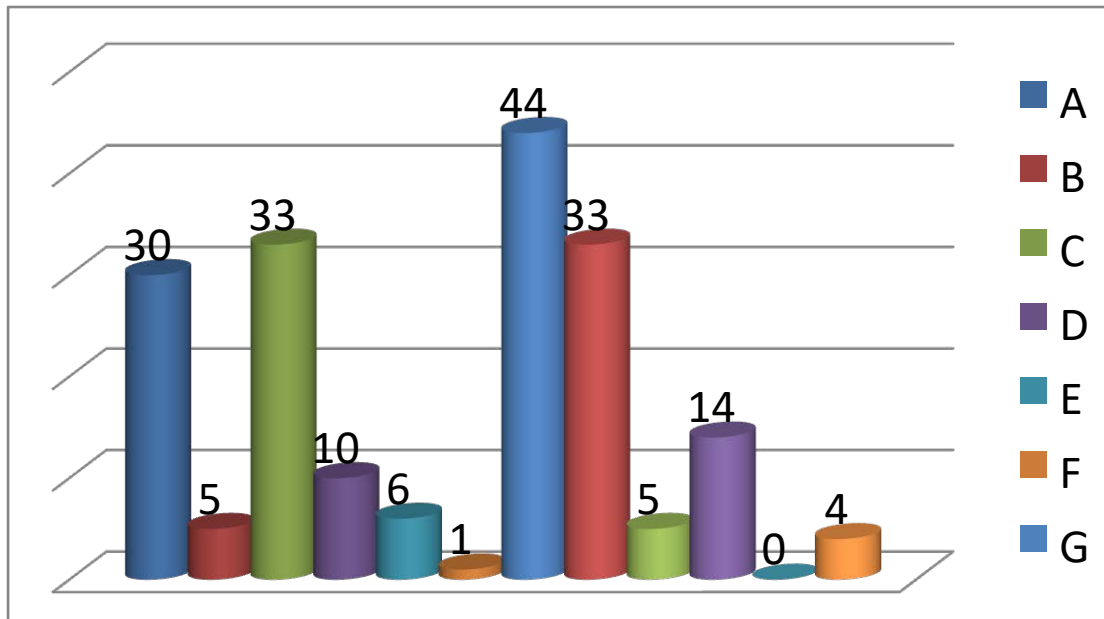


Fig No.4. Prevalence of Psychological Disturbances (percentage)

Observation from the screening is suggestive of higher prevalence of mood and anxiety related complaints. Symptoms representing anxiety features are highest amongst the students from section C, D, E, F, and G with prevalence rate of 33, 10, 6, 1, and 44 percent respectively. Mood affections show the next higher prevalence rate from section A and B of 30 and 5 percent respectively. Then comes the somatic features mentioned under section H show a prevalence rate of 33 percent. Then follows the features of hyperactivity and impulsivity mentioned under section I and J show a prevalence rate of 5 and 14 percent respectively. No psychotic features mentioned under section K were evident from the screening and only 4 percent reported with use of substance mentioned under section L of the symptomatology list.

Prevalence of psychological disturbances in science and commerce stream

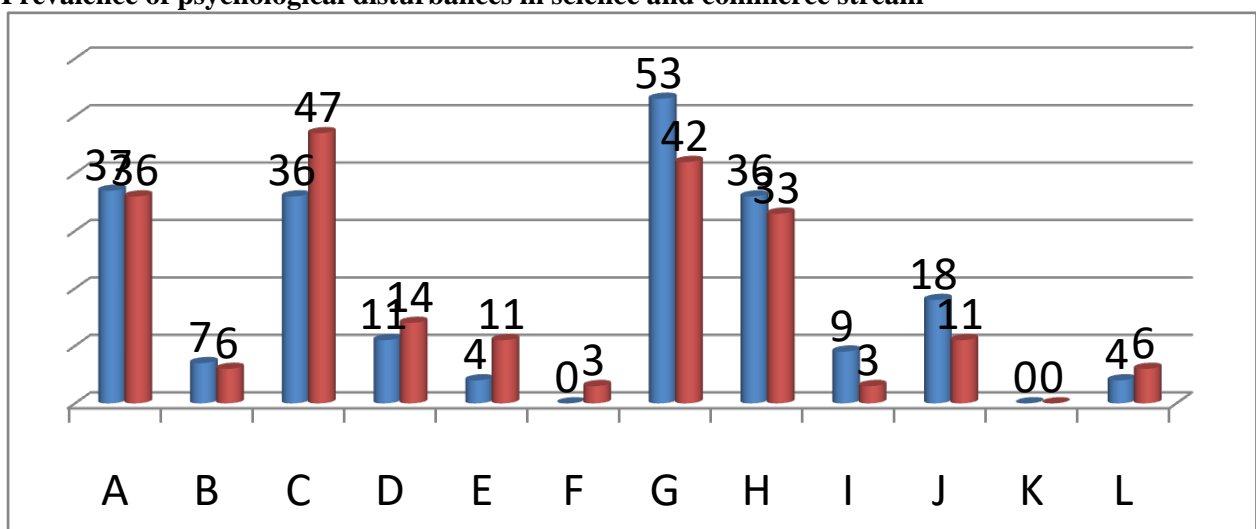


Fig No. 5. Prevalence of Psychological Disturbance in percentage amongst Science and commerce students

Anxiety features as from Section C, D, E, F and G for science students is 36, 11, 4, 0 and 53 percent and for commerce students are 47, 14, 11, 3 and 42 percent respectively. The graph is suggestive of the prevalence of anxiety related features are more prominent amongst the commerce students than science students. Commerce students showed the presence of specific phobias which were absent amongst science students. Generalized anxiety features are predominant with 53 percent amongst science students than 42 percent of commerce students.

Mood affections as specified under section A and B are 37 and 7 percent respectively for science students. Commerce students show the prevalence rate of 36 and 6 percent under section A and B respectively. Mood affections show higher prevalence amongst science students than commerce students.

Somatic features, hyperactive and impulsive features as mentioned under H, I, J are 36, 9, 18 percent amongst science students and 33, 3, 11 percent amongst commerce students respectively. Here science students show a higher prevalence rate as compared to commerce students.

No psychotic features were evident amongst both streams of students. Use of substance mentioned under section L, show a higher prevalence amongst commerce students of 6 percent and 4 percent amongst science students.

Prevalence of psychological disturbances between males and females

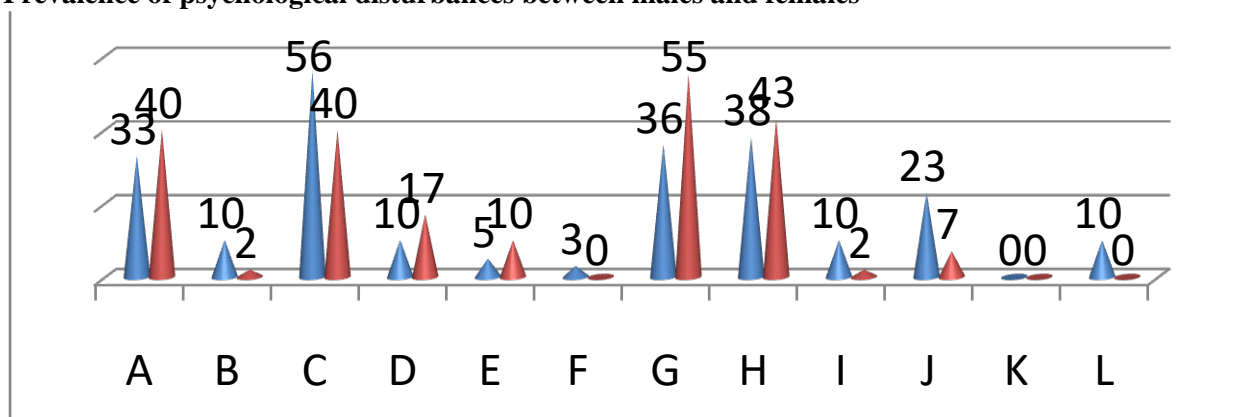


Fig No. 6. Prevalence of psychological disturbance between male and female students

Anxiety features as from Section C, D, E, F and G for male students is 56, 10, 5, 3 and 36 percent and for female students are 40, 17, 10, 0 and 55 percent respectively. The graph is suggestive of the prevalence of anxiety related features are more prominent amongst the female students than male students commonly. Females show higher predominance in generalized anxiety features but males show more of panic features.

Mood affections as specified under section A and B are 33 and 10 percent respectively for male students whereas female students show the prevalence rate of 40 and 2 percent under section A and B respectively. Depressive kind of features is more prevalent amongst the females and manic type of feature is more prevalent amongst males.

Somatic features as mentioned under section H show a higher prevalence amongst females of 43 percent while males of 38 percent. Hyperactive, inattentive and impulsive features as mentioned under I and J are 10 and 23 percent amongst male students whereas 2 and 7 percent amongst female students respectively. Here male students show a higher prevalence rate as compared to female students.

No psychotic features were evident amongst the students. Use of substance mentioned under section L, show a higher prevalence amongst male students of 10 percent and no prevalence amongst female students.

Homoeopathic medicine intervention for Exam related Anxiety State

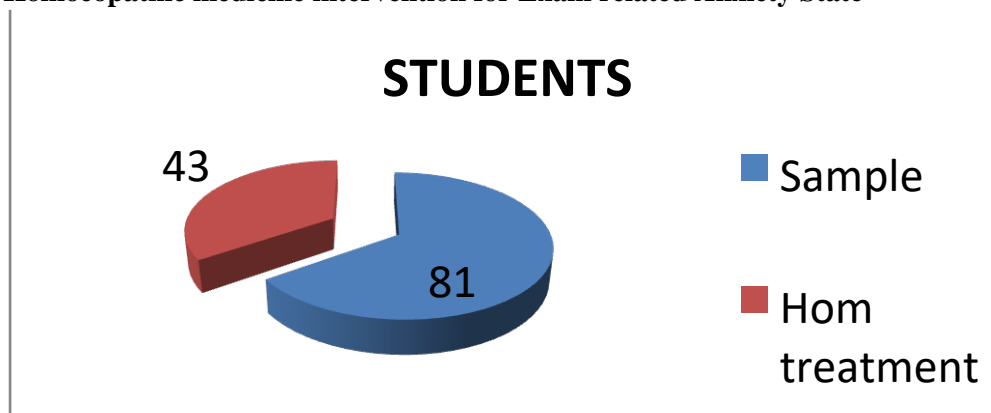


Fig No. 7. HOMOEOPATHIC INTERVENTION (PERCENT)

Out of the total sample of 90 students who scored 9 and above in GHQ 28 questionnaire, 81 students were screened for exploring the pattern of psychological disturbances. The remaining 9 students were not willing for the study. Now the **total sample size is 81 students**. From 81 students, 43 students were prescribed who was in obvious need of intervention before exam to control the Exam related Anxiety State **Homoeopathic Medicines intervened in Exam related Anxiety State**

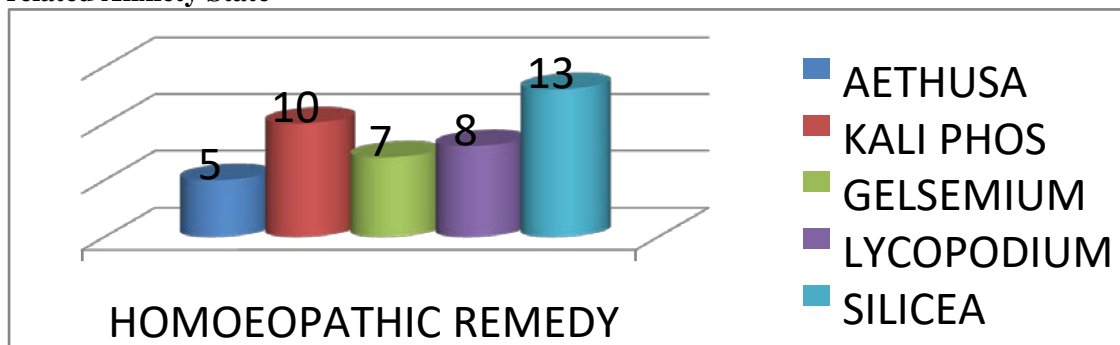


Fig. No. 8 HOMOEOPATHIC MEDICINE INTERVENED AMONGST STUDENTS

As per the indication in individual case homoeopathic medicines Aethusa, Kali phos, Gelsemium, Lycopodium and Silicea was given. Aethusa was prescribed to 5 students, Kali phos for 10 students, Gelsemium for 7 students, Lycopodium for 8 students and Silicea for 13 students.

Response to Homoeopathic Medicines

REMEDY	SCIENCE	COMMERCE	TREATMENT GIVEN	F/UP AVAILABLE	RR
AETHUSA	4	1	5	4	>++
KALI PHOS	4	6	10	6	>+
GELSEMIUM	3	3	7	5	>++
LYCOPODIUM	7	1	8	5	>++

SILICEA	6	7	13	12	>++
TOTAL	24	19	43	32	

Table No. 4. REMEDY RESPONSE IN BOTH STREAMS OF COLLEGE

Out of 43 students only 32 students took the medicine and followed up. The remedy responded well in individual cases with effective treatment for the Anxiety state during exams. All students showed equal response and was much improved with homoeopathic medicines and attempted well for exam.

Kali Phosphoricum showed little response than compared to other medicines. Further analysis with the follow up is suggestive of effective action of Aethusa and Gelsemium for somatic complaints of abdominal pain. Kali Phosphoricum was effective for nervousness and exhaustion during exam phase. Lycopodium significantly improved the intellectual functioning and confidence amongst the students. Silicea was able to effectively control the endocrinal features of palpitation, perspiration and chilliness before performance.

Analysis of remedy response

REMEDY	RESPONSE AFTER TREATMENT
Aethusa	Somatic complaints of abdominal pain was markedly reduced
Kali Phosphoricum	Nervous exhaustion was significantly reduced
Gelsemium	Somatic complaint of diarrhea was improved with trembling and weakness
Lycopodium	Intellectual functioning of the individual was improved significantly
Silicea	Endocrinal features of perspiration, palpitation and chilliness was improved markedly

CONCLUSION

- **Prevalence rate of 49 % of psychological disturbances** amongst the adolescents attending junior college irrespective of the stream and sexes was present .
- With positive scoring of 9 and above, **36 % of the high prevalence rate was screened to explore the prevalence and nature of various psychological disturbances** in them.
- Mood affections, Anxiety features, Somatization, InattentivenessHyperactivity, Impulsive reactions and Substance use especially alcohol was identified as the predominant nature of psychological disturbance amongst the adolescents. Most of the students were identified with the combined features of psychological disturbances with variable presentation.
- There was certain difference in the occurrence of illness between the science and commerce students. Science students showed more of mood affections whereas commerce students showed more of anxiety related symptoms. Somatic complaints were more predominant in science students than commerce students. Substance use was common in both but was more prevalent amongst commerce students.
- Gender difference in the occurrence of the illness shows higher prevalence of panic features in males and generalized anxiety feature in females, manic features in males whereas depressive features in females. Higher prevalence of inattentivenesshyperactivity, impulsive reactions amongst males and somatic complaints in females. Use of substance is prevalent amongst males whereas absent in females.

- There was not any significant disparity between in the occurrence of psychological disturbances between the three selected colleges.
- Homoeopathic intervention was done for a cohort of 43 students who were in need to overcome exam related anxiety state. Aethusa, Kali Phosphoricum, Gelsemium, Lycopodium and Silicea were prescribed as per the indication. Follow up shows effective action of all the homoeopathic medicines and students experienced less distress after intervention.
- Further analysis with the follow up is suggestive of prominent action of Aethusa and Gelsemium for somatic complaints of abdominal pain. Kali Phosphoricum was effective for nervousness and exhaustion during exam phase. Lycopodium significantly improved the intellectual functioning and confidence amongst the students. Silicea was able to effectively control the endocrinal features of palpitation, perspiration and chilliness before performance.
- Homoeopathic correspondence for individual case was studied with personality and temperament understanding.

CONFLICT OF INTEREST

There is no conflict of interest

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