

“Effectiveness of wellness intervention on physical and psychological dimensions among adolescence from selected schools.”

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1. Introduction:

Students and adolescents undergo academic stress which leads to many mental health issues like anxiety, depression, suicidal ideation and suicide (Mahapatra & Sharma, 2020). Academic stress, particularly in Asian children is a result of various factors demographic differences, socio-economic variables, education systems and cultural values (Nandagaon & Raddi, 2020). In India has a unique cultural, social and economic way, which influences mental health of students through societal norms and expectations (Deb et al, 2015). Students face immense pressure to perform well in exams due to parental expectations. Academic performance is a marker of self-worth and societal status. Students fear failure and often social stigma is attached to it. Students face societal judgement and discrimination on basis of academic pressure. This leads to anxiety and discrimination among children (K. Singh et al, 2015; Ninan et al, 2019). Mental health program at school level is important to counter the psychological problems and prevent extreme violence or suicidal ideation in children. There are no comprehensive mental health programs that can be introduced at school levels (Kumar D 2021). The World Health Organization (WHO) recommends that mental health intervention in schools should be at four levels: Level 1: Promotion of psychosocial competence which needs to be integrated in the school curriculum; Level 2: focus on mental health education and should be part of the general health curriculum; Level 3: focus on those children who may need additional psychosocial interventions in school; and level 4: specifically for those children who are in need of professional help due to their mental health issues. (Kumar D 2021). India is a geographically vast and diverse country with varied socioeconomic conditions. Schools differ in terms of resources, socioeconomic background of children, educational level of parents, etc. Schools are held under different boards such as the central boards and the state boards. Central and state ministries have their roles and responsibilities and function related to child health and development. Framing a comprehensive mental health program that covers the whole country and takes care of all these diversities is complex and difficult to implement (Kumar D 2021). Using structured and well implemented mental health programs will play crucial role in understanding efficacy and further improvement required in the plan. This can be considered as basis for planning, designing and implementing major programs at national level in all the schools uniformly.

2. Material and Methods

The study protocol was reviewed and approved by the Institutional human ethics committee. A quantitative research approach was adopted, utilizing a quasi-experimental pre-test and post-test design. The study was conducted among adolescent boys and girls aged 14–16 years from secondary schools in the Pune district. School-going adolescents within the age group of 14–16 years, including both males and females who were willing to participate, were included in the study. Informed consent was obtained either in English or Marathi language. Adolescents who were already been diagnosed with any emotional or behavioural disorder were excluded. The sample size was calculated using the formula $n = Z_2 * p(1-p)/e^2$, and was estimated to be 280 participants, with 140 participants each in experimental and control groups. Demographic variables were collected and assessed using structured questionnaire. Mental health was assessed using the Abraham and Prasanna Mental Health Status Scale questionnaire, which consists of five components namely physical, intellectual, psychological, familial and social dimension. Mental health status was assessed for all participants in both experimental and control groups during the pre-test and post-test phases. Answers were obtained using codes 0, 1, and 2 (0=no; 1=sometime and 2=yes for positive questions and 0=yes; 1= sometimes and 2=no for reverse scoring of negative questions). Total score obtained was categorized as inadequately maintained mental health (for score ≤ 20), moderately maintained mental health (for score of 21 - 40) and adequately maintained mental health (for score of 41-60). A well-structured mental health toolkit program was implemented among adolescents in the experimental group. The program included activities such as meditation, yoga, breathing exercises, fun activities, story narration and other social interaction. The collected data were analyzed using both descriptive and inferential statistics, and the results were presented in terms of frequency, mean, and percentage. Mental health pre and post-test in both groups was expressed as mean ± standard deviation (SD). P-value less than 0.05 was considered significant.

3. Results

3.1 Sociodemographic variables of study population

Total 140 adolescents were included in each experimental and control group between the age group of 14-16 years from 9th and 10th grade. The sociodemographic details of the study population is described in the Table 1

Table 1: Sociodemographic variables of the study population

| Demographic Variable | N=140 n(%) | N=140 n(%) |
|------------------------------|---------------|---------------|
| Age | | |
| 14-15 Years | 98 (70) | 76 (54.3) |
| 15.1-16 Years | 42 (30) | 64 (45.7) |
| Class | | |
| Grade 9 | 98 (70) | 73 (52.1) |
| Grade 10 | 42 (30) | 67 (47.9) |
| Religion | | |
| Hindu | 129 (92.1) | 136 (97.1) |
| Muslim | 8 (5.7) | 3 (2.1) |
| Other | 3 (2.1) | 1 (0.7) |
| Father's Education | | |
| Profession or honours | 7 (5%) | 12 (8.6%) |
| Post Graduate | 0 (0) | 3 (2.1) |
| Graduate | 21 (15) | 5 (3.6) |
| High school Certificate | 11 (7.9) | 2 (1.4) |
| Secondary School Certificate | 16 (11.4) | 16 (11.4) |
| Primary School Certificate | 20 (14.3) | 18 (12.9) |
| No Formal Education | 65 (46.4) | 84 (60) |
| Mother's Education | | |
| Profession or honours | 1 (0.7) | 2 (1.4) |
| Post Graduate | 0 (0) | 2 (1.4) |
| Graduate | 22 (15.7) | 10 (7.1) |
| High school Certificate | 8 (5.7) | 1(0.7) |
| Secondary School Certificate | 4 (2.9) | 11 (7.9) |
| Primary School Certificate | 35 (25) | 28 (20) |
| No Formal Education | 70 (50) | 86 (61.4) |

| | | |
|-------------------------------------|------------|------------|
| Father's Occupation | | |
| Government | 19 (13.6) | 16 (11.4) |
| Private | 5 (3.6) | 7 (5) |
| Business | 30 (21.4) | 17 (12.1) |
| Farmer | 79 (56.4) | 94 (67.1) |
| Any Other | 7 (5) | 6 (4.3) |
| Mother's Occupation | | |
| Government | 4 (2.9) | 6 (4.3) |
| Business | 9 (6.4) | 10 (7.1) |
| Farmer | 27 (19.3) | 32 (22.9) |
| Any Other | 100 (71.4) | 92 (65.7) |
| Type of Family | | |
| Nuclear | 99 (70.7) | 123 (87.9) |
| Joint | 7 (5) | 6 (4.3) |
| Extended | 34 (24.3) | 11 (7.9) |
| Living status of the Parents | | |
| Staying together | 134 (95.7) | 137 (97.9) |
| Separated | 1 (0.7) | 1 (0.7) |
| Divorce | 5 (3.6) | 2 (1.4) |
| Caretaker or Guardian | | |
| Parents | 128 (91.4) | 134 (95.7) |
| Relatives | 3 (2.1) | 4 (2.9) |
| Others | 9 (6.4) | 2 (1.4) |
| Family Income (Per month) | | |
| Upto Rs. 15,000 | 30 (21.4) | 35 (25) |
| Rs. 15001-25,000 | 13 (9.3) | 27 (19.3) |
| Rs. 25001-35,000 | 79 (56.4) | 63 (45) |
| Above Rs. 35,000 | 18 (12.9) | 15 (10.7) |
| No. of Siblings | | |
| One | 48 (34.3) | 52 (37.1) |
| Two | 27 (19.3) | 39 (27.9) |
| Three | 49 (35) | 34 (24.3) |
| Nil | 16 (11.4) | 15 (10.7) |
| Close friends in School | | |
| 1 – 2 | 50 (35.7) | 53 (37.9) |
| 3 | 45 (32.1) | 51 (36.4) |
| > 3 | 39 (27.9) | 29 (20.7) |
| None | 6 (4.3) | 7 (5) |
| Mass media at Home | | |
| Smart devices | 32 (22.9) | 35 (25) |
| Television | 30 (21.4) | 58 (41.4) |
| Newspaper | 46 (32.9) | 23 (16.4) |
| Computer | 32 (22.9) | 24 (17.1) |

3.2 Pre-interventional Mental Health Assessment

Pre-interventional mental health was assessed in experimental and control group. In pre-test only 13 adolescents in experimental group and 8 adolescents in control group revealed adequate mental health well-being (table 2).

Table 2: Pre-Interventional Mental health (Pre-test)

| Mental health (Pre-test) | Experimental (N=140) | | Control (N=140) | |
|--------------------------|----------------------|-------|-----------------|-------|
| | n | % | n | % |
| Inadequately maintained | 12 | 8.6% | 12 | 8.6% |
| Moderately maintained | 115 | 82.1% | 120 | 85.7% |
| Adequately maintained | 13 | 9.3% | 8 | 5.7% |

In experimental group, 8.6% of the adolescents had inadequately maintained mental health, 82.1% of them had moderate mental health and 9.3% of them had adequately maintained mental health. In control group, 8.6% of the adolescents had inadequately maintained mental health, 85.7% of them had moderate mental health and 5.7% of them had adequately maintained mental health.

3.3 Post-interventional Mental Health Assessment

Post-interventional mental health was assessed in experimental and control group. In post-test more than 80% of the adolescents in experimental group revealed adequately maintained mental health. In control no significant difference as observed in pre-test and post-test. None of the participants showed inadequate mental health after intervention (Table 3).

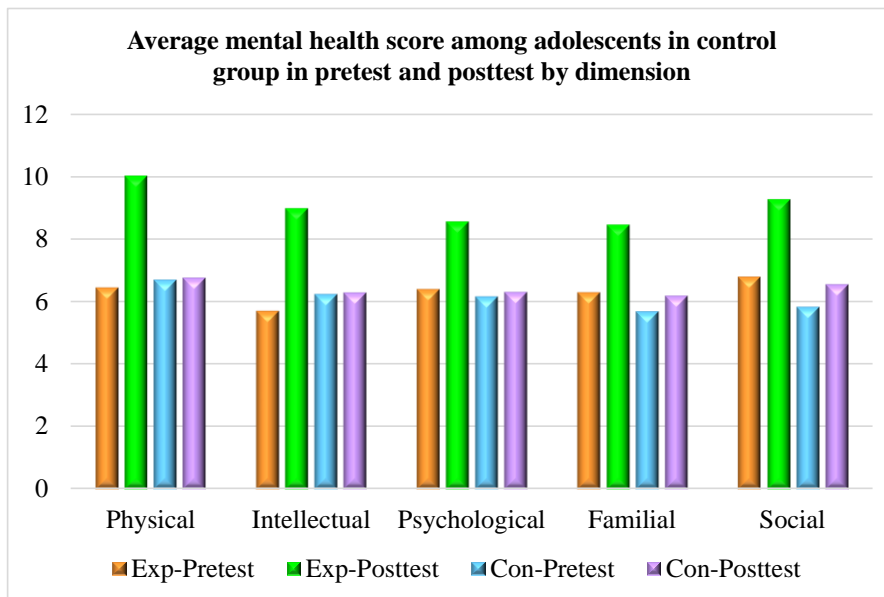
Table 3: Post-Interventional Mental health (Post-test)

| Mental health (Post-test) | Experimental (N=140) | | Control (N=140) | |
|---------------------------|----------------------|-------|-----------------|-------|
| | n | % | N | % |
| Inadequately maintained | 0 | 0.0% | 3 | 2.1% |
| Moderately maintained | 26 | 18.6% | 126 | 90.0% |
| Adequately maintained | 114 | 81.4% | 11 | 7.9% |

3.4 Average Mental Health Score:

Average mental health score in post test in physical, intellectual, psychological, familial and social dimension was significantly higher than that in pre-test ($p < 0.05$) (Figure 1). The mental health tool kit improved the mental health scores after intervention in all physical, intellectual, psychological, familial and social dimension.

Figure1: Average mental health in pre-test and post-test



4. Discussion & Conclusion

In the current study, the average mental health score was higher in the post-test in the experimental group than in the pre-test. Average mental health score in all dimensions included in the study; physical, intellectual, psychological, familial and social dimension were significantly higher than that in the pre-test. Surprisingly demographic variables like family income, occupation of parents, financial status, other status, type of family, religion etc did not show any significant association with the mental health of adolescents. This shows that other factors like excessive screen time, academic stress, lack of quality time with parents or family might be involved and directly associated with the mental health status of the adolescents.

Current results confirm that mental health interventional tool is effective in improving the mental health status of the school going adolescents. Mental health tool kit proved remarkably effective in improving the mental health among adolescents.

Systemic review assessed the effectiveness of mental health interventions in India that included PubMed, PsycINFO, and Cochrane databases. Eleven interventions were included in the review; in which nine were school-based, one community, and one digital intervention. Most of the school-based programs employed life skills curriculum. Other skills included, coping skills and resilience curricula which revealed improvement in depressive symptoms, cognitive abilities, academic stress, problem-solving, and overall mental well-being. The multi-component whole-school intervention was very promising and helped in improving the overall school climate and various other mental health outcomes. Authors concluded that school-based programs should be implemented as an entry point for screening mental health problems. There is a need for a more comprehensive mental health program in the country for adolescents. Additionally, there is a need to address the gap by conducting more interventions for early and out-of-school adolescents (Mehra D; 2022).

Mental health disorders constitute one of the most neglected yet significant health concerns among adolescents. In recent years, both morbidity and mortality attributable to mental health conditions in this age group have shown a rising trend. A community-based study conducted in Goa among individuals aged 16–24 years reported that 3.9% of youth exhibited suicidal behaviours, with females being four times more vulnerable than males. Suicidal behaviour was found to be independently associated with factors such as school absenteeism, independent decision-making without adequate guidance, premarital sexual activity, experiences of sexual and physical abuse, and underlying mental disorders (Pillai, 2009). Our current study and its finding can serve as basis for developing effective mental health interventional tool that can be re-designed or upgraded as per the need of adolescents from different strata of society.

5. References

1. Mahapatra A., Sharma P. (2020). Education in times of COVID-19 pandemic: Academic stress and its psychosocial impact on children and adolescents in India. *International Journal of Social Psychiatry*, 67(4), 397–399. <https://doi.org/10.1177/0020764020961801>
2. Nandagaon V., Raddi S. (2020). Depression and suicidal ideation as a consequence of academic stress among adolescent students. *Indian Journal of Forensic Medicine & Toxicology*, 14(4), 4464–4468. <https://doi.org/10.37506/ijfmt.v14i4.12344>
3. Deb, Sibnath & Strodl, Esben & Sun, Jiandong. (2015). Academic Stress, Parental Pressure, Anxiety and Mental Health among Indian High School Students. *International Journal of Psychology and Behavioural Sciences*. 5. 26-34. 10.5923/j.ijpbs.20150501.04.
4. Ninan P. A., Hirisave U., Girimaji S. C. (2019). Group interventions for children and adolescents with emotional problems: A review of the literature. *Indian Journal of Mental Health (IJMH)*, 6(1), 05. <https://doi.org/10.30877/ijmh.6.1.2019.5-17>
5. Singh K., Junnarkar M., Sharma S. (2015). Anxiety, stress, depression, and psychosocial functioning of Indian adolescents. *Indian Journal of Psychiatry*, 57(4), 367. <https://doi.org/10.4103/0019-5545.171841>
6. Kumar, Devvarta. School mental health program in India: Need to shift from a piecemeal approach to a long-term comprehensive approach with strong intersectoral coordination. *Indian Journal of Psychiatry* 63(1): 91-96, 2021. | DOI: 10.4103/psychiatry.IndianJPsychiatry_204_20
7. Mehra, Devika & Lakiang, Theophilus & Kathuria, Nishtha & Kumar, Manish & Mehra, Sunil & Sharma, Shantanu. (2022). Mental Health Interventions among Adolescents in India: A Scoping Review. *Healthcare*. 10. 337. 10.3390/healthcare10020337
8. A Pillai, T Andrews, V Patel. Violence, psychological distress and the risk of suicidal behaviour in young people in India. *Int J Epidemiol*. 2009;38(2):459–69. doi: 10.1093/ije/dyn166.