



ASSESSMENT OF IMPACT OF MENTAL HEALTH EDUCATION ON MENTAL HEALTH STATUS AMONG JUNIOR COLLEGE STUDENTS.

Community Medicine

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ABSTRACT

A state of happiness facilitating individuals to understand their abilities, deal with the normal stresses of life, work effectively is known as mental health. Mental health status of young students shapes their personality. Better mental health leads to better physical, emotional, psychological and social health.

Mental health literacy is a key to promote healthy living, early detection and prevention of the occurrence of mental health disorders. Hence our study aimed at assessing the impact of mental health education on the mental health status of junior college students.

A cross-over interventional study was undertaken amongst 106 students of 12th standard at a junior college from June to July 2019. The study population was divided into cases and controls on random basis. The Mental Health Inventory 18 questionnaire was used to assess the mental health status of participants. Intervention of mental health education in terms of discussion, music therapy, yoga and meditation was given to cases and pre & post test scores were measured.

As the mental health scores improved our hypothesis about the impact of mental health education on mental health status of students was supported. There was highly significant improvement in the mental health scores and score for all subscales - anxiety, behavioural control, positive affect and depression of cases as compared to controls.

KEYWORDS

Mental health education, MHI-18, intervention, subscales

INTRODUCTION

Mental health can be defined as a state of well-being enabling individuals to realize their abilities, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities.[1] Mental health influences the personal and social functioning of individuals, justifying the importance of intervening upstream to promote mental health.[2]

Epidemiologically, while we still fight infectious public health problems and non-infectious chronic diseases, mental health problems is slowing making its roots in our country. In view of preventing its spread and the positive effect of good mental health on our physical health, improving the mental health of the population from the beginning is our best bet.

Mental health has two components, namely psychological distress and psychological well-being.[3] Psychological well-being mainly studied by positive affect and behavioural control while psychological distress is studied by anxiety and depression.[4]

A promising approach to all the problems is to identify causes of adolescents' impairments in their health and wellbeing. There have been various studies which demonstrated the effect of interventions on the mental health of students.

Most of these intervention programmes include lifestyle enhancement skills, emotional regulation, resilience, interpersonal approaches, self-worth, self-esteem, self-concept, peer support, coping mechanisms, pro-social behaviour and cognitive behavioural therapy. [5]

There is growing evidence on the positive impact of mental health interventions given to adolescents in schools and junior colleges. [6,7,8] Studies show promising results with primary prevention mental health programs. The programs can be conducted at individual, community or environmental levels. [9]

Mental health literacy is a key to promoting early detection and treatment of mental health problems and thus improving longer term outcomes. [10] Promotive interventions in schools improve self-esteem, life skills, pro-social behaviour, scholastic performance and the overall climate [1]. Early interventions in schools and youth development programmes also show more cost effectiveness as compared to other methods. [11,12,13]

Understanding the burden and impact of mental health problems and the cost and effectiveness of their treatment, their prevention emerges to be the best option.

Hence our study was aimed at understanding the status of mental health and its various components in young students. Study was also regarding the assessment of impact of intervention on their mental health, which was conducted through integration of different techniques like mental health education and training in lifestyle enhancement skills.

Objective:

Concept of mental health with its effect on student's life was decided to be discussed in this study.

To assess the impact of intervention by giving mental health education to the cases and without giving intervention (traditional method) to the controls and analysing its impact on the status of mental health and its subscales by a pre and post intervention questionnaire using Mental Health Inventory 18 (MHI-18).

Methodology:

A cross-over interventional study was undertaken amongst 106 students of junior college from June to July 2019. After filling the pre-tested questionnaire MHI18, a 2 hour intervention was given and the post questionnaire was filled. All the students of either sex, aged between 15 to 18 years and whose parents and they themselves gave consent to volunteer as participants were only enrolled in the study.

After getting the pre questionnaire filled, total 106 students were divided equally into "Cases" and "Controls" by simple randomisation and to avoid the effect of confounders like gender, family background further 'cross over' method was adopted.

The MHI18 questionnaire is pre-tested and validated and was prepared for measuring psychological distress in general populations.[3,14] It was used after understanding its concept and explanation.[15,16,17] The scoring was done using Multiple Sclerosis Quality of Life Inventory: A User's Manual.[15] MHI-18 was used to study the mental health status of the students. This instrument is widely used to measure the overall emotional function and was developed by Veit and Ware in 1983. [3] MHI-18 has 4 subscale scores namely anxiety, behavioural control, positive affect and depression in its total score.[14,16,18] After these subdivisions, researcher has computed the Mean MHI

Score for these 4 subscales.

Intervention (Mental Health Education) –

Discussion about various stresses in students' life was done with elaborative examples. The importance of good mental health was explained to the group. It included aspects like concept of body, mind and mental health, developing perfect health and lifestyle enhancement skills, music therapy, yoga and meditation. The various components of mental health included in the discussion were emotional regulation, psychological improvement, interpersonal growth, resilience and a balance between them.

A short session on yoga, breathing exercises and meditation has been followed up with the help of yoga expert. Then post-test questionnaire (MHI-18) was filled by the same students.

On the other hand, in the same time frame, second group of 53 student (controls) who had already taken the pre-test questionnaire were given the regular classes and post-test questionnaire (MHI-18) was filled by these students after their regular classes. As this was a cross over study, same health education intervention was carried out with the Control group also.

The data was analysed using Statistical Package for Social Sciences (SPSS) version 22.0. Pre and post test scores were analysed with t-test. The significant level was set at 0.05.

OBSERVATION AND RESULTS:

Average age of participants was 17 years with SD of 0.6 years. Out of 106 participants, 44(42%) female and 62 (58%) male were involved in study. 106 participants divided into cases and controls equally (53 each). Among 44 females, 30 were in Case group and 14 were in control group. Also out of 62 males 23 were in case group and 39 were in control group.

Improvement in average mental health scores was more in girls (8.30) as compared to boys (6.47). Also improvement of mental health score has been seen in all ages of participants with utmost at age 17 (8.12) followed by age 18(7.95) and 16(3.99). (Figure 1)

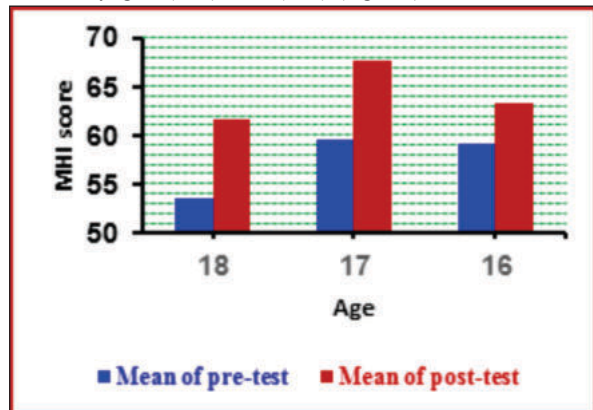


Figure 1: Age Wise Comparison Of Test Scores

For testing the difference in post test score and pre-test score with intervention, the null hypothesis of no difference was rejected. ($p = 4.19637e-10 < 0.05$). Hence mental health education intervention improved marks. (Table 1)

Table 1: Effect Of Mental Health Education Intervention

Difference in Post test Score & Pre-test Score	Paired Difference				t-value	Df	Sig value (2 tailed)	
	Mean	Std. Deviation	Std. Error of mean	95% Confidence Interval of the difference				
				Lower	Upper			
With Intervention	7.5052	7.1209	1	5.5452	9.4652	7.6730	52	4.19637e-10

Without intervention	0.1048	2.1157	0.29	-0.4636	0.6732	0.3607	52	0.7198
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Subscales Of Mental Health Inventory 18 For Cases:

As described in the methodology, transformed scores for participants who were given intervention pre-test and post-test scores of four subscales - anxiety, behavioural control, positive affect and depression has been compared. (Figure 2) It showed that Post test scores for MHI-18 were higher than pre-test scores for MHI-18 score for all four subscales. Pre-test test score showed that behavioural control was at higher level while maximum improvement was seen in anxiety subscale (15.84) with this intervention.

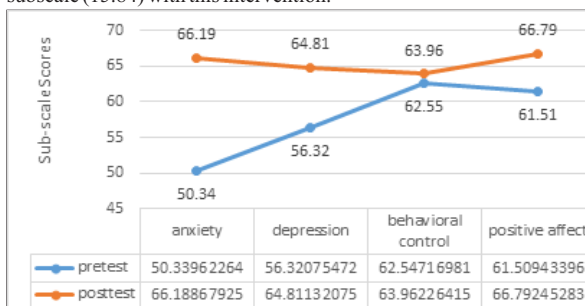


Figure 2: Sub-scale scores of Cases

DISCUSSION:

As the mental health scores increased our hypothesis about the impact of mental health education on mental health status of students is supported. There was significant improvement in the post test score than pre-test score with intervention ($p =$). In the study of Tomaras et al, Weisz et al and Tilford et al [9,19,20] mental health promotion, prevention and treatment strategies result in enhancement of mental health.

The intervention resulted in better mental health. More importance need to be given to mental health of students as it shapes their personality and have life-long effects. Our study was also able to encourage students to talk openly about the problems that they face in their daily life.

As shown in Tomaras et al [9] study, scores of GHQ-28 subscales of anxiety and social dysfunction becoming significantly lowered by the end of the intervention indicates that this intervention might have improved subjective well-being and perceived health status. The results of subscales anxiety and depression in our study were consistent with the above.

Scores of sub-scale positive affect and behavioural control also increased in our study. There was gain in attributes like competence, self-efficacy and coping skills. This may have been due to positive perceived mental health and a renewed spirit to work on them. This is supported by various evidences. [21,22,23,24,25] In study of Lister sharp-tail and Fergus et al [24,25] resilience markedly improves a student's internal characteristics such as strengths and makes them capable of handling themselves. Also, in the studies of Turner et al, Leraya et al and Stewart-Brown et al [21,22,23] interventions showed a significant increase in pro-social and coping behaviour while decrease in risky behaviour. In our study this increase might have been due to understanding of coping mechanisms and knowing the short as well as long term adverse effects of antisocial behaviour.

As observed in our study there was improvement in mental health status after yoga, which might have led to feeling positive about one and others. As found in our study it can also lead to better behavioural controls which are in line with the study of Khalsa et al, Ivztan et al [26,27,28] which showed yoga results in better control over mind. Meditation improves mood and general well-being which was observed in our study as better total mental health score. Studies of Pokoroski et al, Goleman, Iqbal et al and Hankey et al [29,30,31,32] also show that meditation helps in creating an awareness and integration about oneself and helps in better response to stress.

In the study of Wang et al [33] music therapy was shown to relax the mind and in our study also tilted to improved total mental health scores. Srikala et al [34] suggested in their study that mental health

intervention is needed in schools as a co-curricular. On the basis of this study, we also suggest that intervention can be given to students on a weekly/monthly basis.

Improvement in mental health would require a change in the basic nature of the student. Incorporating these behavioural changes in the students' personality isn't easy. It requires intentions, motivation and other factors like personal effectiveness and strategic planning.[35]Mental health promotion programmes produce long-term benefits for young people, including improved emotional and social functioning, positive health behaviours, and improved academic performance and ultimately lead to positive mental health, social and educational outcomes.[5,36]

Limitations:

Our review was limited to interventions targeting adolescents and youth only; however, mental health interventions take a life course perspective. The intervention was only given once and its long term effects are not known. Further follow up is needed in our study. Intervention programs need to be cost effective whilst maintaining quality in order to be applied in practical setting.

CONCLUSION:

There was strong evidence that the mental health education enhanced mental health scores of adolescents. Thus our intervention brought positive improvement in mental health status of students.

Effective long lasting improvement in mental health of people need positive affirmations and intervention on a scheduled basis. The efforts of our government are sparse in this area, our resources are limited, and there is stigma about mental health in our society, in such a scenario our intervention can be applied without resistance from parents and students. Looking at the benefits of health promotion at schools, the possibility of wider application and low cost of our intervention, we suggest its incorporation into routine of schools. Hence intervention on a weekly/monthly basis in school as co-curricular activity is needed.

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