



Gender differences in academic performance of boys and girls in relation to mental health

Sudeepa Patiyal^{1*}, Dr. Manjulata Choudhary², Dr. Sudha Mehta³

¹ Ph.D Research Scholar, Rani Durgavati Vishwavidyalaya, Jabalpur, Madhya Pradesh, India

² Retd. Principal, Govt. M.H College of Home Science & Science for Women Auto, Jabalpur, Madhya Pradesh, India

³ Professor & Head, Department of Psychology, Govt. M.K.B Arts & Commerce Auto, Women College, Jabalpur, Madhya Pradesh, India

Abstract

Objective: The aim of the present study is to assess the gender differences in academic performance of boys and girls in relation to mental health. Mental health is an integral and essential component of health. The WHO constitution states: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." Academic performance according to the Cambridge University Reporter (2003) is frequently defined in terms of examination performance. Academic achievement refers to what the students have learned or what skills the students have learned and is usually measured through assessments like-standardized tests, performance assessments and portfolio assessments (Santrock, 2006).

Methodology: The sample size consisted of 500 students of school going children from CBSE and MP Board. The samples were selected by random sampling method. The tools used for assessing the variables are Socio-demographic, self made consent form and Mental Health Inventory - Jagdish S. and Dr. A.K. Srivastava (1983) Co-Curricular Activity Checklist- Prepared by the Researcher.

Result & Conclusion: There is impact of mental health on academic performance between high and low mental health groups of CBSE and MP Board. The obtained values of F-ratio are 22.88, 32.72 and 57.07 respectively for boys, girls and students. These obtained values are significant at 0.01 level. The boys, girls and students of CBSE with higher mental health have better academic performance than other groups with those of lower mental health of MP Board having lowest academic performance. Thus, from the above results it may be concluded that there is impact of Board of Affiliation on mental health on academic performance of boys, girls and students.

Keywords: gender difference, mental health & academic performance

Introduction

"Mental health includes a number of dimensions: self-esteem, realization of one's potential, the ability to maintain fulfilling, meaningful relationship and psychological well-being."

-Horwitz and Scheid (1992) ^[1]

Mental health problems are usually defined and classified to enable professionals to refer people for appropriate care and treatments, but some diagnosis are controversial and there is much concern in the mental health field that people are too often treated according to or described by their label. This can have a profound effect on their quality of life. Nevertheless, diagnoses remain the most usual way of dividing and classifying symptoms into groups. Most mental health symptoms have traditionally been divided into groups called either 'neurotic' or 'psychotic' symptoms. Neurotic covers those symptoms which can be regarded as severe forms of 'normal' emotional experiences such as - depression, anxiety or panic. Conditions formerly referred to as 'neuroses' are now more frequently called 'common mental health problems.' Less common are psychotic symptoms, which interact with a person's perception of reality, and may include hallucinations such as - seeing, hearing, smelling or feeling

things that no one else can.

Academic performance of students has been considered as an aspect of his total behaviour. It is determined and influenced by the dynamic process of personality. It has been found that the patterns of academic performance are related to certain aspects of personality structure.

Academic performance means "knowledge attained or skills developed in the school subject usually designated by test scores or by marks assigned by teachers or by both" (Good, 1973).

Peterson (1984) has mentioned some factors, which influence academic achievement-general intelligence, study habits, SES, family influence, home environment, parental aspirations and reward personality characteristics, sex differences quality of teaching, school process and school environment, education for docility and peer influences, are some important factors.

The concept of performance refers to the fact that subject is not merely executing a task without assistance but is trying to perform well with the aim of eliciting positive reinforcement for his demonstrated competence in the task. Academic performance means the performance of a student that he makes in school or college or university namely his/her marks in the examination which is the criterion for the performance of the students. Academic performance is also known as academic achievement and scholastic achievement.

Reviews

Bostani, M., Nadri, A., & Nasab, A. R., (2016) ^[7] studied the relation between mental health and academic performance. The results showed that general health and some of its components, such as- depression and anxiety, had a significant relation with educational performance, while no significant relation was observed between academic performance and other components such as- physical symptoms and social performance disorders. According to the findings of this research, it can be concluded that the higher the mental health of the students, the better their educational performance, although it seems that the students' educational performance is also affected by other factors and their interactional effects as well.

Bostani, M., Nadri, A., & Nasab, A. R., (2014) ^[7] studied the relationship between Mental Health and Academic Performance as reported variously in different studies. The present research aims to study the relation between Mental Health and Academic Performance in athletic and non-athletic students of the Islamic Azad University, Ahvaz Branch, Iran. For this purpose, 200 student 100 athletic and 100 non-athletic were selected via random cluster sampling method. In order to collect data, the Goldberg General Health Questionnaire (GHQ-28) was used. The students' total average score was used as an index of their performance. Finally the data were analyzed though using correlation coefficient and independent t-test at the level of confidence of 05%. The results showed that general health and some of its components, such as depression and anxiety, had a significant relation with educational performance, while no significant relation was observed between academic performance and other components such as-physical symptoms and social performance disorders. According to the findings of this research, it can be concluded that the higher the mental health of the students, the better their educational performance, although it seems that the students' educational performance is also affected by other factors and their interactional effects as well.

McLeod, J. D., Uemura, R., & Rohrman, S., (2012) ^[8] studied prior research on the association of mental health and behavior problems with academic achievement and observed that it was limited because it does not consider multiple problems simultaneously, take co-occurring problems into account, and control for academic aptitude. They addressed these limitations using data from the National Longitudinal Study of Adolescent Health (N = 6,315). They estimated the associations of depression, attention problems, delinquency, and substance use with two indicators of academic achievement (high school GPA and highest degree received) with controls for academic aptitude. Attention problems, delinquency, and substance use were significantly associated with diminished achievement, but depression was not. Combinations of problems involving substance use were especially consequential. The results demonstrated that the social consequences of mental health problems are not the inevitable result of diminished functional ability but, rather, reflect negative social responses. These results also encourage a broader perspective on mental health by demonstrating that behavior problems heighten the negative consequences of more traditional forms of distress.

Eisenberg, D., Golberstein, E. & Hunt, J., (2009) ^[9] studied that the Mental health problems represent a potentially important but relatively unexplored factor in explaining human capital accumulation during college. They conducted the study to know that how mental health predicts academic success during college in a random longitudinal sample of students. They found that depression was a significant predictor of lower Grade Point Average (GPA) and higher probability of dropping out, controlling for prior academic performance and other variables. The association between depression and academic outcomes was strongest among students with a positive anxiety disorder screen. Within-person estimates using our longitudinal sample, found again that co-occurring depression and anxiety are associated with lower GPA, and searched that symptoms of eating disorders are also associated with lower GPA. This descriptive study highlights the policy relevance of generating more definitive causal estimates of the effect of mental health on college success, which will likely require a randomized trial.

In the present research, researcher was tried gender differences in academic performance of boys and girls in relation to mental health.

Hypothesis: There will be no significant gender differences in academic performance of boys and girls in relation to mental health

Methodology

Sample

The sample of the present study consisted of 500 students-250 were girls and 250 boys from different single sex schools of different board i.e., CBSE and MP Board. The age range of the students was 14-16 years.

Inclusion Criteria

1. Single sex of schools were taken
2. Those consenting and cooperating for the study

Exclusion Criteria

1. Co-ed schools were not taken.
2. Parents' educations were not taking.

Tool Used

1. Mental Health Inventory - Jagdish S. and Dr. A.K. Srivastava (1983) ^[10].

Mental Health Inventory (MHI) was used for measuring the mental health status of the students. The scale assesses the mental health in six dimensions; 1) Positive Self-Evaluation (PSE) 2) Perception of Reality (PR) 3) Integration of Personality (IP) 4) Autonomy (Autny) 5) Group Oriented Attitudes (GOA) and 6) Environmental Mastery (EM).

The scale consists of 54 statements with 4 alternative responses for each statement as - always, most of times, sometimes and never, anchored from 1 to 4. For the true-keyed statements the scoring of 1,2,3,4 was given to never, sometimes, most of times, always and reverses for false-keyed statements. Out of 54 statements 31 statements are related negatively while 23 statements positively. Total score and score in each dimension is calculated and categorized as very good, good, average, poor and very poor. High scores indicate

better mental health. The norms are different for each gender.

2. Academic Performance

Academic performance is the outcome of education – the extent to which a student, teacher or institution has achieved their educational goals. It is taken by students’ examination mark that is filled by the Class teachers of the student.

Consent Form

A self made form explaining about the purpose and consent

Result & Discussion

Table 1a: Comparative results of academic performance of boys and girls in relation to mental health of MP Board

Board of Affiliation	Mental Health	Gender	N	M	SD	CR	'P' value
MP Board	High	Boys	54	63.83	14.23	1.27	>0.05
		Girls	30	67.53	11.90		
	Low	Boys	41	58.12	13.83	1.60	>0.05
		Girls	79	54.03	12.17		

Degree of freedom-82/118 Minimum value at 0.05 level- 1.99/1.98
 Minimum value at 0.01 level- 2.64/2.62

From the results presented in the above table it becomes clear that there are no gender differences in academic performance of boys and girls in relation to mental health. The obtained values of critical ratio for high and low mental health groups are 1.27 and 1.60 respectively which are less than minimum

for participation in the study.

Procedure

In the beginning of research work authorities of the school were contact. After the permission data was collected. After developing a good rapport form the students Mental Health Inventory were applied then administered to Academic Performance. Data obtained were analyzed using the Statistical Package for the Social Sciences, (SPSS) version 20.

value for significance at 0.05 level. Thus, from the above results it may be inferred that there are no gender differences in low academic performance in relation to mental health of MP Board.

Table 1b: Comparative results of impact of mental health on academic performance of CBSE and MP board students

Gender	Board of Affiliation	Mental Health	N	M	SD	F-ratio	'P' value
Boys	CBSE	High	77	77.61	13.05	22.88	<0.01
		Low	21	65.52	10.36		
	MP Board	High	54	63.83	14.23		
		Low	41	58.12	13.83		
Girls	CBSE	High	41	79.66	12.87	32.72	<0.01
		Low	39	66.56	18.23		
	MP Board	High	30	67.53	11.90		
		Low	79	54.03	12.17		
Students	CBSE	High	118	78.32	12.97	57.07	<0.01
		Low	60	66.20	15.83		
	MP Board	High	84	65.15	13.49		
		Low	120	55.43	12.85		

Degree of freedom- 3,185/3,189/3,378 Minimum value at 0.05 level-2.65/2.65/2.62
 Minimum value at 0.01 level-3.88/3.88/3.83

The table shows that there is impact of mental health on academic performance between high and low mental health groups of CBSE and MP Board. The obtained values of F-ratio are 22.88, 32.72 and 57.07 respectively for boys, girls and students. These obtained values are significant at 0.01 level. The boys, girls and students of CBSE with higher

mental health have better academic performance than other groups with those of lower mental health of MP Board having lowest academic performance. Thus, from the above results it may be concluded that there is impact of Board of Affiliation on mental health on academic performance of boys, girls and students.

Table 1c: Comparative results of impact of mental health on academic performance of boys and girls of CBSE and MP Board

Mental Health	Board of affiliation	Gender	N	M	SD	F-ratio	'P' value
High	CBSE	Boys	77	77.61	13.05	17.04	<0.01
		Girls	41	79.66	12.87		
	MP Board	Boys	54	63.83	14.23		
		Girls	30	67.53	11.90		
Low	CBSE	Boys	21	65.52	10.36	8.83	<0.01

	MP Board	Girls	39	66.56	18.23		
		Boys	41	58.12	13.83		
		Girls	79	54.03	12.17		

Degree of freedom- 3,176/3,198

Minimum value at 0.05 level- 1.97/1.97

Minimum value at 0.01 level- 2.60/2.60

The table shows that there is impact of mental health on academic performance of boys and girls of high and low mental health groups of CBSE and MP Board. The obtained value of F-ratio are 17.04 and 8.83 respectively for high and low mental health groups, these values are significant at 0.01 level.

The girls of CBSE of higher mental health have better academic performance in comparison to other groups whereas the boys of MP Board have lowest academic performance for low mental health groups. The academic performances of girls of CBSE have better academic performance in comparison to others whereas girls of MP Board have lowest academic performance.

Thus, from the results of the above table it can be concluded that there is impact of Board of Affiliation and gender on high and low mental health groups.

Conclusion

The previous chapter with analysis and discussions of results along with verification of hypothesis. The research has reached the stage where conclusions may be drawn on the basis of above. The conclusions have been presented according to the variables in the following sub-sections:-

1. There is no significant impact of gender in academic performance of boys and girls in relation to mental health. The obtained values of critical ratio are 1.24 and 1.12 respectively which are statistically insignificant at 0.05 level. (Reference table no. 1.a)
2. Academic performance of boys and girls of high and low mental health of CBSE. The obtained values of critical ratio are 0.82 and 0.92 respectively which are statistically insignificant. (Reference table no. 1.a)
3. There are no gender differences in academic performance of boys and girls in relation to mental health of MP Board. The obtained values of critical ratio are 1.27 and 1.60 respectively which are less than minimum value for significance at 0.05 level (Reference table no. 1.c).

Limitations

1. The sample had been taken from one place only.

Future Direction

1. Sample can be increased for the generalization of result.
2. Sample can be taken from various schools.

References

1. Horwitz, Scheid. Approaches to Mental Health & Illness: conflicting definitions and emphasis. A Handbook for the Study of Mental Health, 1999, p2.
2. <https://www.alchemyformanagers.co.uk/topics/VvReS6amhdTHs57L.html>
3. Basis Documents, Forty-Fifth edition, Supplement, 2006.
4. <http://www.ijip.in/Archive/v4i4/18.01.015.20170404.pdf>
5. Parmar FP. Academic Achievement among Secondary

School Students in Relation To Area. International Journal of Indian Psychology, 2017, 4(4), DIP:18.01.015/20170404, DOI:10.25215/0404.015

6. http://shodhganga.inflibnet.ac.in/bitstream/10603/51826/6/06_chapter%201.pdf
7. Bostani M, Nadri A, Nasab AR. A Study of the Relation between Mental Health and Academic Performance of Students of the Islamic Azad University Ahvaz Branch. Procedia-Social and Behavioural Sciences. 2014; 116:163-165. www.sciencedirect.com
8. McLeod JD, Uemura R, Rohrman S. Adolescent mental health, behavior problems and academic achievement. Journal of Health and Social Behavior. 2012; 53(4):482-497. Retrieved on 25th of June 2014 from www.jhsb.sagepub.com/doi/10.1177/0022146512462888.
9. Eisenberg D, Golberstein E, Hunt J. Mental Health and Academic Success in College. Journal of Economic Analysis & Policy, 2009. <http://www-personal.umich.edu/~daneis/papers/Eisenberg,%20Golberstein,%20&%20Hunt%20-%20May%202%202009.pdf>
10. Jagdish S, Srivastava AK. Mental Health Inventory, 1983.