
Mental Health Symptoms Predict Academic Achievement of the Female Students

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ABSTRACT

The present study attempted to assess the role of mental health symptoms in predicting and shaping the academic achievement of the female graduate students. A two hundred and thirty nine females studying in undergraduate courses belonging to high (M = 18.76, SD = 1.63), middle (M = 18.59, SD = 1.43), and low (M = 18.32, SD = 1.00) socioeconomic status (SES) Maged 16 to 24 years took part in the study whose mental health symptoms, socioeconomic status (SES) and academic achievement were measured by standardized psychometric tools. The results of the study revealed that emotional problems, conduct problems, hyperactivity and peer problems components of mental health symptoms have negative correlations with the scores of academic achievement of the participants whereas the scores of pro-social behaviour component of mental health symptoms of the female students exhibited a positive correlation with the scores of academic achievement. The high, middle and low socioeconomic status of the participants affected their mental health symptoms and academic achievement. The regression analyses showed that the mental health

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symptoms predicted the academic achievement of the participants. Thus, mental health symptoms and socioeconomic status of the female participants have significant implications for the academic achievement of the students. The results of the study have significant theoretical and practical implications for developing an understanding of the dynamics of academic achievement of the students. The results of the study have been discussed in the light of current theories and findings of mental health and academic success of the students. The conclusions of the study will help the educationists, researchers, academicians, education policy makers and public at large to understand the role of mental health in shaping the academic achievement of the students. The suggestions for future researchers have also been discussed.

Keywords: *Mental Health Symptoms, Emotional Problems, Conduct Problems, Hyperactivity, Peer Problems, Pro-Social Behaviour, Academic Achievement, Socioeconomic Status.*

Quite a good number of researchers exhibited that there is a significant relationship among academic self-concept, academic motivation, and academic achievement (Marsh, Byrne, & Shavelson, 1988; Valentine, DuBois, & Cooper, 2004). Initially, researchers of self-concept confined themselves on the contribution of global self-concept to academic outcomes and empirical examination of model of Shavelson, Hubner and Stanton (1976) which suggested significant but modest correlations between global self-concept and grades for both children and adolescents (Marsh, 1990). An intensive examination revealed negligible impact of combined effects of global and academic self-concepts on academic outcomes (Marsh & O'Mara, 2008). It was also confirmed in a study of Marsh and colleagues (2008) in which a longitudinal associations among global and academic self-concepts for a sample of 2213 10th grade boys at 5 time points (early 10th grade, late 11th grade, high school graduation, 1 year post-graduation, and 5 years post-graduation) were observed. The researchers looked the

other aspect of self-concept i. e. non-academic self-concept, to explain the academic achievement of the students.

In recent years, non-academic self-concept has received greater attention by the researchers who have found it useful in explaining not only academic success but also functioning of the students in the other areas. According to Suntonrapot, Auyporn, & Thaweewat (2009), it has the ability to produce causes not only in the academic setting but also outside the classroom. It is able to provide more important information than academic self-concept for improving students' skills, characters, social, behavior and academic achievement. The importance of non-academic self-concept is further highlighted by Williams (1993) who has observed that the role of non-academic self-concept in academic achievement has been underestimated by the researchers. Williams (1991) studied the relative influence of self-concept and test anxiety on the academic achievement of 116 high school students. He reported that test anxiety and self-concept had independent influences on achievement of the students. The high achieving students were reported to had fewer cognitive concerns about testing, perceived themselves to be competent and sought to be more dependable whereas low-achieving students were high in test anxiety, perceived themselves to be dependable and sought to be more social (Williams, 1991).

The results of the studies reported a dependable relationship between non-academic self-concept and academic achievement (Hasenzadeh, Hussini, & Moradi, 2004; Suntonrapot et al., 2009). The findings by Chong (2007) also reported a positive correlation between non-academic self-concept and academic achievement but the relationship is weak for children in remedial classes as compared to students in normal classes. Some studies contradicted with these findings and came to the conclusion that non-academic self-concept is a negative predictor of academic achievement (Sánchez & Roda, 2003). In the same line, another study reported no relationship between non-academic self-concept and academic self-concept with academic achievement (Marzuki, 2002).

The mental health symptoms, an important component of non-academic self-concept, have been reported to impact academic achievement of preschool children (Arnold, 1997) and adolescents (Eisenberg, Golberstein, & Hunt, 2009). Preschool children exhibiting externalizing disorders (attention deficit/hyperactivity disorder, oppositional defiant disorder, and conduct disorder) were found to show lower grades in school as compared to their peers, as well as higher rates of grade repetition, aggression and school dropout. The early childhood teacher ratings of externalizing behavior were reported to be correlated strongly with delinquency (Hinshaw, 1992). In addition, aggression was more likely to result in joining special education programs or lower grade by children after controlling for IQ (Hinshaw, 1992).

The results of a longitudinal study of a large sample of children exhibiting parent-reported depression and anxiety at age six to eight were less likely to graduate high school after controlling for race, gender, SES, and maternal factors (Breslau, Lane, Sampson, & Kessler, 2008; McLeod & Kaiser, 2004). A study by Cole, Martin, Peeke, Seroczynski, and Fier (1999) reported in their longitudinal study of eight hundred seven 3rd and 6th grade students that anxiety and depression shaped their academic self-concept and resulted into them feeling less competent academically. It is suffice to conclude that mental health symptoms and other components of non-academic self-concept have a meaningful association with the self-concept of the students and significant impact on the academic performance also. Many studies revealed associations between low global self-concept and internalizing disorders, particularly depression and suicidal ideation, in children and adolescents (Dumont & Provost, 1999; Harter, 1993). Recent studies, however, have questioned these findings and came to the conclusion that while low global self-concept correlates with depression, the direction of causality remains unclear (Baumeister, Campbell, Krueger, & Vohs, 2003). The specific sub-domains of self-concept have been reported to show significant correlation than global self-concept with mental health symptoms (Bidell & Deacon, 2010).

Thus, previous researches demonstrate that low academic self-concept predicts poor academic achievement, mental health disorders also predict poor academic achievement, global self-concept relates to both academic self-concept and mental health symptoms, sub-domains of self-concept show stronger associations than global self-concept to academic outcomes and associations between sub-domains of the self-concept may not be as limited as earlier research suggested (Ogle, Frazier, Nichols-Lopez & Cappella, 2016). The research suggests that even brief interventions that target non-academic sub-domains of self-concept can improve academic and mental health outcomes for adolescents and adults, effectively leveraging prior findings regarding the reciprocal influence of self-concept on functional outcomes, and suggesting that different sub-domains may influence each other more than previously believed (Cohen, Garcia, Apfel, & Master, 2006). Thus, it is evident from the review of literature that there is dearth of studies showing the impacts mental health symptoms on the academic achievement of the students. In this backdrop, the present study aims to study the impacts of mental health symptoms and socioeconomic status on the academic achievement of the female graduate students.

Objectives

1. To study the impacts of the components of the mental health symptoms on the academic achievement of the participants, and
2. To inquire into the nature of the socioeconomic status differences in mental health symptoms and academic achievement of the participants

Hypotheses

1. The female participants with high, middle and low socioeconomic status will differ in their mean scores on emotional problems, conduct problems, hyperactivity problem, peer problems and pro-social behaviour mental health symptoms and academic achievement.
2. The emotional problems, conduct problems, hyperactivity problem and peer problems components of mental health symptoms will show negative correlations whereas pro-social

behaviour will indicate a positive correlation with the academic achievement of the female students.

3. The high, middle and low socioeconomic statuses, emotional problems, conduct problems, hyperactivity problem, peer problems and pro-social behaviour mental health symptoms will predict academic achievement of the female students.

METHODS AND PROCEDURE

A correlational design was used in the present study. The stratified sampling procedure was employed to select the sample from science, arts and commerce departments of Dr. H. S. Gour University, Sagar, M. P. and Government (Autonomous) Girls P. G. College of Excellence, Sagar, M. P.

Sample

Two hundred and thirty nine regular female undergraduate students aged 16 to 24 years belonging to high, middle and low socioeconomic status served as the participants in the study. Out of two hundred and thirty nine participants, 41.84%, 43.10 and 15.06 belonged to high, middle and low socioeconomic levels, respectively. The students were pursuing undergraduate programmes in arts, commerce and science streams. The consent was sought from the principal and heads of the concerned departments before the start of the study. The students with no known prior history of physical and mental illnesses were included in the study.

Tools

Following psychometric tools were employed in the present study:

1. **Strength and Difficulties Questionnaire (SDQ):** The Hindi translation of the SDQ (Goodman, 1997), a well validated and widely used self-report measure of psychopathology, was employed to screen out the students for mental health symptoms and impairment in five sub-domains: emotional difficulties (corresponding to internalizing symptoms), conduct problems, hyperactivity, peer problems and pro-social behaviour). It consists of 25 items with three alternatives i.e. 0–2 (not true, somewhat true

and certainly true). It has shown validity in multiethnic samples i.e. majority and minority populations (Hill & Hughes, 2007). Its scores correspond to the mental health symptomatology construct in the theoretical model. The internal consistency by Cronbach alpha and retest stability estimates of reliability have been reported to be .73 and .62, respectively (Goodman, 2001).

2. **Socioeconomic Status Scale:** Socioeconomic Status scale standardized by Aggarwal et al., (2005) on Indian population was used to assess the socioeconomic status of the participants. The scale consists of 22 items with multiple choice answers. It categorizes the individuals and families into six categories such as Upper High >76, High 61-7), Upper Middle 46-60, Lower Middle 31-45, Poor 16-30 and Very Poor or Below Poverty Line <15. It has been widely used in behavioural sciences research.
3. **Academic Outcome:** The marks obtained by the students in their examination of last academic class were used as an index of their academic achievement.

Procedure

After having been planned and procured the required tools as per the design, the sample was selected for the study. It was divided into twelve groups comprising twenty participants each for the convenience of administering the tools. Before conducting the actual study, an integrated strategy was developed and a thorough study of the questionnaires and other details including the precautions and instructions was read and understood. The researchers read the instructions aloud along with the pace of the participants to control the time of presentation of each item of the scales. As per the formulated plan of the study, the various scales were administered and the scoring was carried out as per the guidelines depicted in the manuals. The raw scores so obtained were arranged as per the design of the study. With the completion of the task of data collection, the same were treated with the help of SPSS (Statistical Package for the Social Sciences), a software programme to analyze the data. The data were treated with

mean, standard deviations (SDs), t-test, Pearson Product Moment correlation and regression analysis statistics.

RESULTS

The results of the study demonstrated that the participants with high socioeconomic (SES) status demonstrated average higher score on emotional problems (M = 3.55, SD = 2.16) as compared to the female participants of middle (M = 3.41, SD = 1.90) and low (M = 3.44, SD = 2.08) socioeconomic status. For the conduct problems, the middle SES participants (M = 2.99, SD = 1.76) indicated higher mean score as compared to high (M = 2.85, SD = 1.68) and low SES (M = 2.31, SD = 1.62) participants. Likewise, the participants from middle SES (M = 3.24, SD = 1.68) showed higher mean score on hyperactivity as compared to high (M = 3.06, SD = 1.66) and low SES (M = 2.83, SD = 1.70) participants. Contrary to this, the female participants from high SES (M = 3.49, SD = 1.52) showed higher mean score on peer problems as compared to the middle (M = 3.10, SD = 1.53) and low SES (M = 3.42, SD = 1.86) participants. On the pro-social behavior dimension of mental health symptoms, the female participants from lower SES (M = 8.75, SD = 1.56) showed higher mean score as compared to high (M = 8.42, SD = 1.50) and middle SES (M = 8.32, SD = 2.10) participants.

Table 1: Mean scores and SDs of emotional problems, conduct problems, hyperactivity, peer problems and pro-social behaviour and academic achievement scores of the high, middle and low SES female participants

S. No.	Measures	High SES			Middle SES			Low SES		
		Mean	SD	N	Mean	SD	N	Mean	SD	N
1.	Emotional Problems	3.55	2.16	100	3.41	1.90	103	3.44	2.08	36
2.	Conduct Problems	2.85	1.68	100	2.99	1.76	103	2.31	1.62	36
3.	Hyperactivity	3.06	1.66	100	3.24	1.68	103	2.83	1.70	36
4.	Peer Problems	3.49	1.52	100	3.10	1.53	103	3.42	1.86	36
5.	Pro-Social Behaviour	8.42	1.50	100	8.32	2.10	103	8.75	1.56	36
6.	First four Combined	12.95	5.40	100	12.74	4.86	103	12.00	5.19	36
7.	Marks (Aca. Ach.)	67.31	9.99	100	67.19	10.72	103	63.81	12.45	36

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When the data of emotional problems, conduct problems, hyperactivity and peer problems of the female participants arranged in three socioeconomic classes, the female participants from high SES ($M = 12.95$, $SD = 5.40$) showed higher mean score on peer problems as compared to middle ($M = 12.74$, $SD = 4.86$) and low SES ($M = 12.00$, $SD = 5.19$) participants. The marks of the female students of their last examinations were treated as the index of their academic achievement. The average academic achievement score of the females from high SES ($M = 67.31$, $SD = 9.99$) was higher as compared to the middle ($M = 67.16$, $SD = 10.72$) and low SES ($M = 63.81$, $SD = 12.45$) participants.

The results of t-test indicated that the female participants of high SES ($t = 1.80$, $df = 35$, $p = .05$) differed significantly to those of low SES participants on emotional problems dimension of mental health symptoms. Likewise, these two groups also significantly differed in their mean scores on hyperactivity ($t = 2.64$, $df = 35$, $p = .01$) and when the scores of the first four dimensions were combined except pro-social dimension ($t = 3.07$, $df = 35$, $p = .004$). In addition, the participants of high and middle SES females differed significantly in their mean scores on peer problems ($t = 2.19$, $df = 99$, $p = .03$). The mean scores on academic achievements of the high and low SES female participants also demonstrated statistically significant difference ($t = 2.05$, $df = 35$, $p = .05$). The rest of the high, middle and low SES comparison groups did not show statistically significant differences in their mean scores on the emotional problems, conduct problems, hyperactivity problems, peer problems and pro-social behaviour dimensions of mental health symptoms and academic achievement.

The scores of the mental health symptoms and academic achievement of the students were pooled and their mean standard deviations were computed. The female participants exhibited lower mean score on conduct problems ($M = 2.83$, $SD = 1.72$) followed by hyperactivity ($M = 3.11$, $SD = 1.67$), peer problems ($M = 3.31$, $SD = 1.58$), pro-social behaviours ($M = 3.31$, $SD = 1.58$) and emotional problems ($M = 3.47$, $SD = 2.03$). The average academic achievement

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score of the participants was ($M = 66.73$, $SD = 10.73$). The total acquired scores on all the five dimensions of mental health symptoms were compared with the help of t-test which demonstrated that the participants differed in their acquisition of mean scores on emotional problems and conduct problems ($t = 4.86$, $df = 238$, $p = .000$), emotional problems and hyperactivity problems ($t = 3.02$, $df = 238$, $p = .003$), emotional problems and pro-social behaviour ($t = 26.77$, $df = 238$, $p = .000$) but did not differ significantly on emotional problems and peer problems ($t = 1.17$, $df = 238$, $p = .244$). The scores of the first four dimensions i. e., emotional problems, conduct problems, hyperactivity problems and peer problems were pooled and its mean score was compared with the mean score of the pro-social behaviour component which also evinced significant difference ($t = 11.24$, $df = 238$, $p = .000$).

Table 2: The Coefficients of correlation among the scores of five components of mental health symptoms and academic achievement of the high, middle and low SES female participants

Dimensions of Mental Health Symptoms and Academic achievement	High SES		Middle SES		Low SES	
	r	p	r	p	r	p
Emotional Problems-Percentage of Marks	-.105	.300	-.025	.803	-.389	.019
Conduct Problems-Percentage of Marks	-.165	.102	-.075	.451	.204	.232
Hyperactivity-Percentage of Marks	-.185	.065	.119	.233	.034	.846
Peer Problems-Percentage of Marks	-.016	.874	.121	.222	-.045	.896
First four Combined-Percentage of Marks	-.155	.125	.042	.673	-.097	.575
Pro-Social Behaviour-Percentage of Marks	.071	.480	.022	.823	-.054	.754

The coefficients of correlations were computed which exhibited that there were negative correlations among the scores of emotional problems ($r = -.012$, $p = .064$), conduct problems ($r = -.048$, $p = .460$), hyperactivity ($r = -.007$, $p = .916$) and pro-social behaviour

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($r = -.005, p = .943$) whereas the scores on peer problems component of mental health symptoms showed a slight positive correlation with the scores of academic achievement ($r = .033, p = .615$). The data were also treated in terms of the socioeconomic status of the participants i. e. high, middle and low SES. The results indicated that emotional problems ($r = -.105, p = .300$), conduct problems ($r = -.165, p = .102$), hyperactivity ($r = -.185, p = .065$) and peer problems ($r = -.155, p = .125$) were negatively correlated with the scores of academic achievement whereas pro-social behaviour evinced a positive correlation of ($r = .071, p = .480$) with the academic achievement of the high SES students. In case of the students of middle SES, the negative correlations were found among the scores of emotional problems ($r = -.025, p = .803$) and conduct problems ($r = -.075, p = .451$) with the scores on academic achievement. Contrary to this, hyperactivity ($r = .119, p = .233$), peer problems ($r = .121, p = .222$) and pro-social behaviour ($r = .005, p = .943$) indicated a slight positive correlations with the academic achievement of the middle SES students. The scores of emotional problems ($r = -.389, p = .019$), peer problems ($r = .045, p = .896$) and pro-social behaviour ($r = .054, p = .754$) of low SES participants indicated negative correlations with the scores of academic achievement whereas conduct problems and ($r = .204, p = .232$), hyperactivity ($r = .034, p = .846$) showed slight positive correlations. The details have been displayed in Table 2.

Table 3: Regression analysis of scores of emotional problems, conduct problems, hyperactivity, peer problems and pro-social behaviour and academic achievement of the female students in terms of their socioeconomic status.

S. No.	Dimensions of Mental Health Symptoms	High SES					Middle SES					Low SES				
		R	R ²	R ² Δ	F	p	R	R ²	R ² Δ	F	p	R	R ²	R ² Δ	F	p
1.	Emotional Problems	.105	.011	.011	1.087	.300	.025	.001	.001	.063	.803	.389	.151	.151	6.056	.019
2.	Conduct Problems	.165	.027	.027	2.731	.102	.075	.006	.006	.573	.451	.204	.042	.042	1.482	.232
3.	Hyperactivity	.185	.034	.034	3.490	.065	.119	.014	.014	1.439	.133	.034	.001	.001	.038	.846
4.	Peer Problems	.016	.000	.000	.025	.874	.121	.015	.015	1.510	.222	.045	.002	.002	.068	.796
5.	First four Combined	.155	.024	.024	2.397	.125	.042	.002	.002	.180	.673	.097	.009	.009	.321	.575
6.	Pro-Social Behaviour	.071	.005	.005	.403	.580	.022	.000	.000	.050	.823	.054	.003	.003	.100	.754

The scores were also treated with regression analysis assuming the five components of mental health symptoms and the three levels of socioeconomic status of the participants as the predictors and academic achievement as the criterion. The values of regression analyses have been put in Table 3 which shows that low scores on the various dimensions of mental health symptoms indicated better mental health and predicted 2% to 4% of the academic achievement of the female students irrespective of their socioeconomic status.

DISCUSSION

The results of the study evinced that the participants with high socioeconomic (SES) status demonstrated average high score on emotional problems as compared to the female participants of middle and low SES. For the conduct problems, the middle SES participants showed higher mean score as compared to high and low SES participants. Likewise, the participants from middle SES showed higher mean score on hyperactivity as compared to high and low SES participants. The female participants from high SES showed higher mean score on peer problems as compared to middle and low SES participants. On the pro-social dimension of mental health symptoms, the female participants from lower SES showed higher mean score on peer problems as compared to high and middle SES participants. When the data of emotional problems, conduct problems, hyperactivity and peer problems of the female participants arranged in terms of three socioeconomic classes, the female participants from high SES showed higher mean score on peer problems as compared to middle and low SES participants. The average academic achievement of the females from high SES was higher as compared to middle and low SES participants.

The results of t-test indicated that the female participants of high SES differed significantly to those of low SES participants on emotional problems dimension of mental health symptoms. Likewise, these two groups also significantly differed in their mean scores on hyperactivity and when the scores of the first four dimensions were combined except pro-social dimension. In addition, the participants of

high and middle SES females differed significantly in their mean scores on peer problems. The mean scores on academic achievements of the high and low SES female participants also demonstrated statistically significant difference. The rest of the high, middle and low SES comparison groups did not show statistically significant differences in their mean scores on the emotional problems, conduct problems, hyperactivity problems, peer problems and pro-social behaviour dimensions of mental health symptoms and academic achievement.

The analysis of the pooled data showed that the female participants exhibited lower mean score on conduct problems followed by hyperactivity, peer problems, pro-social behaviours and emotional problems. The total acquired scores on all the five dimensions of mental health symptoms were compared with the help of t-test which demonstrated that the participants differed in their acquisition of mean scores on emotional problems and conduct problems, emotional problems and hyperactivity problems, emotional problems and pro-social behaviour but did not differ significantly on emotional problems and peer problems. The scores of the first four dimensions i. e., emotional problems, conduct problems, hyperactivity problems and peer problems were pooled and its mean score was compared with the mean score of the pro-social behaviour component which also evinced significant difference.

The negative correlations among the scores of emotional problems, conduct problems, hyperactivity and pro-social behaviour whereas the scores on peer problems component of mental health symptoms showed a slight positive correlation with the scores of academic achievement. In addition, the emotional problems, conduct problems, hyperactivity and peer problems were negatively correlated with the academic achievement whereas pro-social behaviour evinced a positive correlation with the scores of academic achievement of the high SES students. In case of the students of middle SES, the negative correlations were found among the scores of emotional problems and conduct problems and their scores on academic achievement. Contrary to this, hyperactivity, peer problems and pro-social behaviour indicated

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slight positive correlations with the academic achievement of the middle SES students. The scores of emotional problems, peer problems and pro-social behaviour of low SES participants indicated negative correlations with their scores of academic achievement whereas conduct problems and, hyperactivity showed slight positive correlations. The regression analyses showed that low scores on the various dimensions of mental health symptoms indicated better mental health and predicted 2% to 4% of the academic achievement of the female students irrespective of their socioeconomic status.

The results of the study evinced that in consonance with the hypotheses, mental health symptoms and socioeconomic status of the students were significantly associated with their academic achievement. Such results have also been recently reported in a study of Ogle et al. (2016). Most of the components of the mental health symptoms of the students indicated negative correlations except pro-social behaviours with the academic achievements. The socioeconomic status of the students also found to shape the academic achievement. The students who showed higher negative mental health symptoms also did poorer in their academic examinations. The results of the study also indicated that the gap in the socioeconomic status of the students determined and shaped their status of mental health that finally resulted into their particular levels of academic achievements.

The most important critical conclusion having significant theoretical and practical implications is that mental health symptoms have meaningful relevance for the academic performance for adolescents and adults. Such results have been reported for school children by previous researchers. The results of the present study are contradictory with the findings of the previous researches that had viewed academic self-concept as unrelated to the non-academic self-concept (Marsh & Shavelson, 1985) with no or limited impacts on the other components. The results support the arguments envisaged in the self-concept model of McConnell (2011) that conceived the mental health self-concept as a sub-domain helping the students perceive themselves relative to others and regulate their academic motivation, mental health, academic self-concept, engagement and study skills.

Previous researchers have shown that the self-concept from mental health perspective assumed self-esteem or self-worth as vulnerabilities that correlate with depression and other disorders (Dumont & Provost, 1999; Harter, 1993; Marsh et al., 2004). Consequently, the mental health symptoms have been reported to be less useful in predicting academic achievement (Baumeister et al., 2003). Contrary to this argument, the results of the present study evinced a significant association of mental health symptoms with academic achievement. It corroborates that mental health interventions can have an additive impact benefitting both school achievement and mental health of the students (Ogle et al., 2016). Thus, the results of the present study indicate a new area of research where the future researchers with distinct specialties such as clinical psychology, school psychology and social psychology can work together and collectively involve to understanding the dynamics of academic achievement and success.

IMPLICATIONS AND FUTURE DIRECTIONS

The focus of the present study was to develop a comprehensive understanding about the nature and dynamics of the academic achievement adapting mental health perspective. It helped to partial out the role of mental health symptoms and socioeconomic status in shaping the academic achievement of the participants. The results of the study have important theoretical and practical implications for researchers, academicians, policy makers, administrators and public at large. Its conclusions will help to understand the role of mental health perspective in the overall growth and development of the students of our country. It would also have important usefulness to the government policy makers to chart out plans to enhance achievement of the students adopting an eclectic perspective. Further, it would help the government policy makers to merge the mental health and educational plans together and enhance effectiveness of the both. Future researchers should carry out scientific studies involving self-esteem (Tiwari, 2011), non-academic self-concepts such as body image (Jain & Tiwari, 2016a; Jain & Tiwari, 2016b; Tiwari, 2014; Tiwari, Kumar, 2015), forgiveness (Mudgal & Tiwari, 2015), physical

health (Tiwari, 2015), emotional intelligence Tiwari, 2016a), yoga and mental health (Tiwari, 2016) along with mixed methods design to have a better understanding of the dynamics of academic success and achievement with mental health perspective hitherto a little known aspect of academic success.

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