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High Schoolers' Study Skills: Do Sources of Distress Really Matter? A Cross Sectional Study at a Community School Riyadh, Saudi Arabia

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ABSTRACT

Background: Student's academic excellence in studies depends mainly on their study skills, which is a powerful construct that affects self-efficacy and wellbeing. This relationship is interrelated and bi-directional. The aim of this study was to measure the study skills, find the key stressors and determine the relationship between study skills and distress symptoms among high school students.
Methods: The study was carried out in February 2020, at a community owned non-profit International English medium school in Riyadh, Saudi Arabia. In this cross-sectional-correlational study, convenience sampling strategy was used. Participants filled the demographic questionnaire along with the Study Skills Inventory (SSI) and Kessler psychological distress scale (K10). The statistical analysis used t-tests, ANOVA, Pearson's correlation coefficient and stepwise multiple regression.
Results: The mean total SSI score was 43.15 ± 8.26 out of a possible total of 69. The total SSI score was higher (45.46+ 8.162) for female as compared to their male counterparts (41.23+ 7.86) and was statistically significant (p=0.001). A statistically significant association was found between the student's sex ($p = 0.000$) and the reading skills and time management ($p = 0.001$). Furthermore, the study year had statistically significant associations with time management ($p = 0.008$), reading ($p = 0.039$) and other learning skills ($p = 0.011$). The regression analysis revealed a satisfactory model that explained the total variance indicating that gender ($p = 0.000$, $\beta = 4.55$), year of study ($p = 0.018$, $\beta = 3.131$) and encouraging teachers' ($p = 0.001$, $\beta = 4.46$) were significant predictors that have an impact on study skills. A statistically significant negative correlation was found between the study skills (SSI total score) and distress symptoms (K10 score) ($r = -0.247$, $p = 0.002$).
Conclusion: The study concludes that poor study skills were found to be correlated with distress symptoms among students. The study skills were higher in the female compared to the male students. Educators need to reconfigure the approach to study skills, provide caring, stimulating environment and easy, stigma-free access to counselling and psycho-education to support the wellbeing of the students. Future qualitative studies are required to explore further the associated factors and explanations for them from a student's perspective.

Key Words: High School Students, Stress, Distress, Study Skills, Learning Environment.

INTRODUCTION

The International Baccalaureate's objective is to develop inquiring, knowledgeable and caring young people who are active, compassionate and lifelong learners.[1] To achieve this, students are expected to have sufficient study skills (SS) to be successful in their learning and goals. SS is a multi-faceted skill and comprises of a wide range of behaviors; the sum of all the habits, determined purposes and enforced practices that the individual uses in order to learn.[2,3] It assists students in their learning and when employed helps them to recall and

recollect the information when needed.[3]

From an educational perspective, effective studying requires better study skills; one of the ways of overcoming and working out the demands of learning.[4] Research has shown that a strategic approach to learning is more effective with better results and less workload.[5] Although acquisition of study skills and strategies contribute to success, students often use less productive, superficial study approaches to learning as they are seldom taught or evaluated about them.[6]

It is an established fact that students find it difficult to manage time, balance studying and other commitments and control emotions when situations make excessive demands.[7] Lack of skills and learning strategies to cope with curriculum demands, academic workload and learning environment are few determinants of student distress.[3,8]

When exploring this phenomenon from a theoretical angle; it is possible that students in difficulty often fail to regulate their actions in situations that are challenging, use least effective techniques that affects their learning and achievement despite hard work and effort[9,11] and lead to higher levels of distress and anxiety.[12,13] For generations, higher education was an equalizer in the society. However, in the present era, colleges and universities have become more selective in student admissions. This has led to academic environments being highly competitive and stressful leading to a large number of students suffering from distress and masked depression.[14] Evidence shows that mental health issues are increasing while student's wellbeing is deteriorating.[15]

Distress is a state of emotional suffering associated with stressors and demands that are difficult to cope with in daily life.[9] This can cause sadness, frustration, anxiety, depression, and a number of negative mood states.[16] Analysis of different studies and authors viewpoint has shown that factors contributing to distress could be internal (individual's own characteristics such as physical/ mental health, self- motivation) external (school/ home environment, teachers) or both. [9,17-20] Unmanaged emotional reactions to stress could affect the learning process negatively. The effects are not limited to the individuals, but may also affect the society at large.[7]

Literature supports a tentative connection between study skills and wellbeing but it has been much explored separately and represent different research population.[7.21]

However, to our knowledge, no comprehensive study on high school students has brought together these factors. Recognizing the alarming situation, investigation of the factors that affect individual mental as well as scholastic performances is needed to improve the learning and coping strategies and thereby improve students' quality of life. These considerations gave rise to following objectives:

Measure the study skills among senior high school students and determine the key stressors.

Assess study skills relationship with the students (a) demographic factors (b) sources of stress and (c) distress symptom score

MATERIALS AND METHODS

Setting: The study was carried out at a community owned non-profit International English medium school in Riyadh, Saudi Arabia. The student samples included expatriates of different socioeconomic, ethnolinguistic groups of Pakistan. Almost, all students inevitably go through an acculturation process that necessitates a psychological and cultural adjustment process that usually occurs whenever a person is exposed to new surroundings/ cultures other than their own. It is a segregated school serving the Pakistan community in Saudi Arabia. The twelve-year comprehensive school is divided into: primary (grades 1–6) and secondary (junior) (7–10) and senior (10-12) high school. All

students are taught the same subjects in the eight-year comprehensive. Like many Pakistani schools, it follows traditional school model.

A teacher centered curriculum with didactic lectures is the main teaching strategy. The teacher decides the teaching methodology, with summative assessment and a pass-fail grading system, thus leaving limited choices for the student.

Sample: With an effect size of 0.1, level of significance 0.05 and power 0.95, the sample size was calculated to be at least 110. All high school students (total 215) were invited to participate. Participation was voluntary.

Participants and Procedures: This was a cross sectional study that utilized convenience sampling to collect data from students of both genders in Grade 11 and 12. The data collection took place at the beginning of the second semester February 2020, to avoid exam stress.

Before the data collection, informed consent was obtained from school administrators and participating students. Students in Grade 11 and 12 were invited to respond to the questionnaires using a paper-and-pencil method. Inventories were completed by the students in group settings at the end of a scheduled morning session on learning styles; under the guidance of the teachers and the principal investigator who explained the anonymity and confidentiality of data collection and use. This study had been reviewed and approved by the Institutional Review Board of the College of Medicine; (Ref. No. 21/0138/IRB).

Survey Instrument:

A self-administered survey was used to collect the data. It consisted of the demographic characteristics namely, gender (male, female), age and study year (Section 1). Section 2 consisted sources of stress and it was divided into three parts: Academic (seven questions), Learning environment covering teaching and school environment (five questions) and finances/others (five questions). These were closed ended and used Yes/No responses. Section 3 had the Study Skills Inventory (SSI) and Kessler psychological distress scale (K10). Informed consent was obtained from all students prior to data collection.

Study Skills Inventory (SSI) as a measure of study skills: Skills Inventory (SSI) by AlFaris et al.[3] assesses the five dimensions or subscales namely reading skills, memory and concentration skills, time management, emotional management skills and other learning practices. The scale is both reliable and valid; consist of a total of 23 items that use a Likert-type response format ranging from: 0 for never (i.e. almost at no times-around 0% of the time), 1 for rarely (i.e. few times-around 25% of the time), 2 for usually (i.e. sometimes-around 75% of the time) and 3 for always (i.e. all the time-around 100% of the time). The maximum total score of SSI equals 69. Cronbach alpha reliability coefficients of SSI was 0.77.

Kessler psychological distress scale (K10) as a measure of psychological distress: The K10 is based on 10 questions about the level of anxiety/ agitation, psychological fatigue and depressive symptoms an individual experiences in the past four-weeks. It has been used in a wide variety of studies and is validated for high school students.[22] Each item is answered on a five-point Likert scale; and the scores are then summed, yielding a minimum score of 10 and a maximum score of 50.[23] Cronbach alpha reliability coefficients of K10 was 0.86.

Data analysis: The SPSS software (version 21.0, IBM Corp, Armonk, NY, USA) was used for the statistical analysis. Descriptive statistics such as frequency, percentages, mean, and standard deviation were calculated. Comparisons were made using t- test to compare the categorical variables (sex and study year) and study skills subscales.

To identify factors that may be associated with the study skills, linear regression analysis was used to investigate

the relationship between study skills as dependent variable; sex, study year and sources of stressors as the independent variable. To create the most parsimonious model, multi-collinearity was avoided by selecting a stepwise method in the regression model. Additionally, Pearson's correlation coefficient was used to find the relationship between the SSI and K10 scores. A $p < 0.05$ was used as the significance level in the study.

RESULTS

150 students filled the questionnaires, with a response rate of 70% (150/215). 56.0% were male (n=84) and 44% (n=66) females, with an age range of 15 and 19 years. The descriptive statistics of the demographics and sources of stress are reported in Table 1.

The sources of distress were categorized into academic stressors, learning environment and finances/ others. Majority were distressed (75%). The major stressors identified by the students were anxiety about good grades (85.3%, n=128), anxiety about exams (79%, n=118), time constraints (76%, n=114) and academic overload (73.3%, n=110).

Table 1: Students' socio-demographic characteristics and sources of stress

	Variables	**Number of students**	**%**
1	Sex		
	Male	84	56.0
	Female	66	44.0
2	Year of study		
	Grade 11	97	64.7
	Grade 12	53	35.3
3	Sources of stress		
	Academic stressors	Yes (N)	%
	Homework and work outside of school	54	36
	Competition with classmates	39	26
	Coping with studies	106	70
	Academic overload	110	73.3
	Anxiety about exams	118	78.7
	Anxiety about Grades	128	85.3
	Pressure from parents for admission in a good university	62	41
	Factors relating to the learning environment.		
	i. Teacher -student relations		
	Teachers are encouraging	100	67
	Teachers help to develop my competencies and confidence to	84	56
	Teachers are well focused and teaching time is put to good use	84	56
	ii. Environment		
	Family problems and home environment	26	17.3
	Unfavorable School environment and administration	48	32
	Finances and others		
	Tuitions are a burden financially	48	32
	Tuitions are a cause of stress	44	29.3
	Tuitions are a cause of reducing stress	65	43.3
	Time constraints	114	76
	Body image perception	44	29.3

The mean and SD of the total SSI score was 43.15±8.26 (62% out of a maximum 69), while the mean of the perceived distress level was 27.28±8.77. The mean ± standard deviation for the SSI score for the subscales are shown in Table 2.

Table 2: Mean (±SD) of study skills subscales

Study skills subscales	**Mean (±SD)**	**Maximum Score**	**% out of the maximum**
Reading skills	8.07 (1.99)	12	67.2
Concentration and memory skills	8.65 (2.33)	15	57.6
Time management skills	8.13 (3.32)	15	54.2
Emotional management skills	7.76 (2.70)	12	64.6
Other learning skills	10.54 (2.47)	15	70.26

For the study skills domains, a statistically significant association was found between the student sex (in favor of female students) and the reading skills (p = 0.000) and time management (p =0.001) respectively. Furthermore, time management (p =0.008), reading (p =0.039) and other learning skills (p =0.011) had statistically significant associations with study year (in favor of senior students). (Table 3)

Table 3: Association between study skills subscales and socio-demographic characteristics

Socio-demographic characteristics		N	Mean of study skills subscales (±SD)				
			Reading skills	Concentration and memory skills	Time management Skills	Emotional management skills	Other learning Skills
Sex	Male	84	7.40 (±2.129)	8.54 (±2.230)	7.31 (±3.230)	7.43 (±2.800)	10.55 (±2.407)
	Female	66	8.92 (±1.428)	8.80 (±2.476)	9.17 (±3.180)	8.18 (±2.535)	10.53 (±2.567)
t-statistic (p-value)			5.216 (0.000*)	0.694 (0.489)	3.519 (0.001*)	1.704 (0.090)	0.042 (0.966)
Year of study	Grade 11	97	7.82 (±2.116)	8.69 (±2.270)	7.60 (±3.138)	7.62 (±2.736)	10.16 (±2.507)
	Grade 12	53	8.53 (±1.683)	8.58 (±2.476)	9.09 (±3.477)	8.02 (±2.649)	11.23 (±2.267)
t-statistic (p-value)			2.086 (0.039*)	0.264 (0.792)	2.686 (0.008*)	0.866 (0.866)	2.562 (0.011*)

Influence of sources of stress on study skills in high school students:

Table 4 illustrates the significant predictors for study skills among students. Stepwise linear regression analyses revealed a satisfactory model that explained the total variance indicating that gender (p= 0.000, β=4.55), year of study (p= 0.018, β=3.131) and encouraging teachers' (p= 0.001, β= 4.46) were significant predictors that have an impact on study skills. Female students were 4 times more likely to have better skills; grade 12 students were 3 times likely to possess better skills. Teachers' encouragement in the class and studies was an important predictor to improve (four times) the students skills.

Table 4: Stepwise multiple regression showing the relationship of SSI with K-10 and other factors

Model	Code	Unstandardized coefficients		P value	95% CI		Goodness of fit		R square	Std. error of the estimate
		B	Std. erroe		Lower bound	Upper bound	F	P value		
(Constant)		36.885	1.364	0.000	34.190	39.579	9.816	0.000	0.168	7.616
Gender	F=1, M=0	4.557	1.258	0.000	2.070	7.043				
Teachers are encouraging	Yes=1 No=0	4.468	1.372	0.001	1.757	7.179				
Year of study	G12=1 G11=0	3.131	1.304	0.018	0.554	5.708				

DISCUSSION

This study found that high school students' study skills were negatively associated with distress symptoms. To the best of our knowledge, this is the first time that the relationship between study skills and distress symptoms has been reported among a cohort of high school students. The regression model indicated that the gender, year of study and encouraging teachers were the factors associated with study skills. These results can assist the academia in understanding the elements that impacts students learning; hence influence educators to adopt healthier instruction, particularly in relation to communication and better learning environment.

The findings of the current study suggest that a non-significant difference exists in the study skills of male and female students. Time management and reading showed significant association with both

years of study (in favor of senior students) and sex (in favor of female students). These results supported and confirmed previous research findings.[7,24-26] Overall, the time management and concentration & memory scores were lower as compared to the other domains. Previous work has established a link between memory and time management. Multitasking and spending a lot of time on tasks increases cognitive load which indirectly contributes to poor concentration and increases burnout.[7,27] Apart from time management skills, other appropriate learning skills are also needed.[28] Sex is a significant factor to be noted while considering study skills; as men and women differ not only physically but also in other attributes like learning and cognition.[24-26] Girls can multitask, have the ability to transition between lessons, have better time management, memory, listening, reading and writing capabilities as compared to their counter parts.[26,27] However, the other learning skills were better among seniors and male students. How Is this relevant to education? Educators need to be aware of these differences; so as to design and implement gender-based instructional strategies for teaching.

The determinants of study skills for students in this study were related to sex, year of study, and teachers. The students in our sample showed significantly higher distress than in the age matched population in other studies.[28-32] These figures affirm vulnerability to psychological disturbances and extrapolate a probability of academic and psychosocial overload. The sources of psychological disturbances are multidimensional. Hence, use of screening tools to measure the study skills and psychological disturbances among students is a priority. Research has shown that stress markedly hampers the updating of memories and impairs memory retrieval and interferes with a student's ability to concentrate; which may explain some problems faced by students in remembering.[33] Analysis showed teachers' encouragement as one of the factors for better study skills. Teaching is a complex set of practices, the effects of the helpful, encouraging teachers are considerable.[29] Previous studies have shown that a healthy psychosocial learning environment with stress free teacher-student interactions and encouragement are a key factor for study progress and most powerful tools a teacher can use to build students learning.[34,35]

The study found that the study skills were negatively affected by distress. Research has found that students with severe mental distress were four times likely to have low self-efficacy and twice likely delayed study progress.[36] Self-efficacious students tend to have better well-being, more energetic and persistent in their learning.[37]

However, a correlation does not imply causation. The relationship is interrelated and bi-directional. In other words, it reciprocally influences one another. This is in line with findings from the organizational literature, though, other cognitive and emotional factors can also affect student's study skills and learning outcomes.[27] A sojourn stay becomes an added factor, which may play role in emergence of distress among students. In our sample of students this effect might be further enhanced due to problems in adjusting to local community and curricula, linguistic and social problems. This finding suggests that the differences observed may have other origins and warrant further investigation.

The peculiarity of the study in terms of study skills and its predictors makes it a reference for future studies among high school students on this important topic. Although it provides valuable information, it has few limitations. First, the study used a cross-sectional design; therefore, a causal relationship cannot be determined. Second, the sample was from one high school and this may limit the generalizability of results to all population. In addition, it raises the question whether this is specific to a community or a similar pattern exists among the different regions? Third, as with most

survey questionnaires, bias and subjectivity may be an issue.

CONCLUSION AND IMPLICATIONS FOR PRACTICE

The findings of the study suggest that the study skills were higher in the female compared to the male students and were correlated with distress symptoms among students. The contributing factors for better skills were study year, sex and teacher's encouragement. The study findings may be used to develop new educational interventions aimed at improving the psychological well-being and the teaching- learning process of the struggling high school students in the local and international context

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REFERENCES

1. Na Li. Approaches to learning: Literature review, international Baccalaureate research paper. 2012 available from: https://www.ibo.org/globalassets/publications/ib-research/approachestolearningeng.pdf , accessed on August 3, 2021.
2. Lawrence ASA. Relationship Between Study Habits and Academic Achievement of Higher Secondary School Students. Indian Journal of Applied Research. 2014; 4(6):143-5.
3. AlFaris E, Irfan F, AlSayyari S, AlDahlawi W, Almuhaideb S, Almehaidib A, Almoqati S, Ahmed AMA, Ponnamperuma G, AlMughthim M, Shaffi Ahamed S, Al Maflehi N, Vleuten CV. Validation of a new study skills scale to provide an explanation for depressive symptoms among medical students. PLoS One. 2018 Jun 25;13(6):e0199037. doi: 10.1371/journal.pone.0199037.
4. Morales-Rodríguez FM, Espigares-López I, Brown T, Pérez-Mármol JM. The Relationship between Psychological Well-Being and Psychosocial Factors in University Students. Int J Environ Res Public Health. 2020 Jul 2;17(13):4778. doi: 10.3390/ijerph17134778
5. Kalaleh AR, Dehnad A, Arabshahi SKS, Hosseini AF, Bigdeli S. Academic skills for post-graduate students: a choice or a necessity? Procedia Soc Behav Sci. 2014;116:5180–3. https://doi.org/10.1016/j.sbspro.2014.01.1096.
6. Hattie J, Biggs J, Purdie N. Effects of Learning Skills Interventions on Student Learning: A Meta-Analysis. Review of Educational Research. 1996;66(2):99-136. doi:10.3102/00346543066002099
7. AlFaris E, AlMughthim M, Irfan F, Al Maflehi N, Ponnamperuma G, AlFaris HE, Ahmed AMA, van der Vleuten C. The relationship between study skills and depressive symptoms among medical residents. BMC Med Educ. 2019 Nov 21;19(1):435. doi: 10.1186/s12909-019-1870-x.
8. Dyrbye LN, Thomas MR, Shanafelt TD. Systematic review of depression, anxiety, and other indicators of psychological distress among US and Canadian medical students. Acad Med. 2006; 81:354–73.
9. Addonizio FP. Stress, coping, social support, and psychological distress among MSW students. ProQuest Dissertations Services. 2011. 3481178. Available from ProQuest Central; ProQuest Dissertations & Theses Global https://www.proquest.com/docview/905163879?accountid=44936. [Accessed on 11 August 2021].
10. Dunlosky J, Rawson KA, Marsh EJ, Nathan MJ, Willingham DT. Improving students' learning with effective learning techniques: promising directions from cognitive and educational psychology. Psychol Sci Public Interest.2013;14(1):4-58. https://doi.org/10.1177/1529100612453266
11. Blasiman RN, Dunlosky J, Rawson KA. The what, how much, and when of study strategies: comparing intended versus actual study

behaviour. Memory.2017;25(6):784–792. https://doi.org/10.1080/09658211.2016.1221974
12. Heinen I, Bullinger M, Kocalevent RD. Perceived stress in first year medical students - associations with personal resources and emotional distress. BMC Med Educ. 2017 Jan 6;17(1):4. doi: 10.1186/s12909-016-0841-8.
13. Hailikari T, Katajavuori N, Asikainen H. Understanding procrastination: A case of a study skills course. Soc Psychol Educ.2021; 24, 589–606. https://doi.org/10.1007/s11218-021-09621-2
14. Shahmohammadi N. Students coping with Stress at high school level particularly at 11th & 12th grade. Procedia - Social and Behavioral Sciences. 2011; 30:395–401. DOI:10.1016/j.sbspro.2011.10.078.
15. Thorley C. Not By Degrees: Improving student mental health in the UK's Universities, The Institute for Public Policy Research. 2017; Available from: http://www.ippr.org/research/publications/not-by-degrees. [Accessed on 8 August 2021].
16. Bewick B M, Koutsopoulou, Jeremy M, Slaa, Barkham M. Changes in undergraduate students' psychological well-being as they progress through university. Studies in Higher Education. 2010; 35. 633-645. 10.1080/03075070903216643.
17. Chou PC, Chao YM, Yang HJ, Yeh GL, Lee TS. Relationships between stress, coping and depressive symptoms among overseas university preparatory Chinese students: a cross-sectional study. BMC Public Health. 2011 May 19; 11: 352. doi: 10.1186/1471-2458-11-352.
18. Archer J, Lamnin A. An investigation of personal and academic stressors in college campuses". Journal of College Student Personnel. 1985; 26(3), 210-215.
19. Hurst CS, Baranik LE, Daniel F. College student stressors: a review of the qualitative research. Stress Health. 2013; 29(4):275-85. doi: 10.1002/smi.2465.
20. Bulo JG, MG Sanchez. Sources of stress among college students. CVCITC Research Journal, 2014;1 (1), pp 16 – 25.
21. Barrable A, Papadatou-Pastou M, Tzotzoli P. Supporting mental health, wellbeing and study skills in Higher Education: an online intervention system. Int J Ment Health Syst. 2018 Oct 6;12:54. doi: 10.1186/s13033-018-0233-z. PMID: 30323858; PMCID: PMC6173914
22. Siu Mui Chan & Thomas Chak Tong Fung (2014) Reliability and validity of K10 and K6 in screening depressive symptoms in Hong Kong adolescents. Vulnerable Children and Youth Studies, 9:1, 75-85, DOI: 10.1080/17450128.2013.861620
23. Kessler RC, Barker PR, Colpe LJ, Epstein JF, Gfroerer JC, Hiripi E, et al. Screening for serious mental illness in the general population. Arch Gen Psychiatry. 2003;60(2):184-9.
24. Zaidi ZF. Gender Differences in Human Brain: A Review. The Open Anatomy Journal. 2010. DOI:10.2174/1877609401002010037
25. Unwalla N. Comparative Analysis of Study Habits Between Males and Females. International Journal of Innovative Science and Research Technology.2020; 5(7),182-87. Available from: https://ijisrt.com/assets/upload/files/IJISRT20JUL062.pdf.
26. Bonomo V. Gender Matters in Elementary Education Research-based Strategies to Meet the Distinctive Learning Needs of Boys and Girls. Educational Horizons. 2010; 88.257-264. https://files.eric.ed.gov/fulltext/EJ895692.pdf
27. Severiens S, Ten Dam G. Leaving College: A Gender Comparison in Male and Female-Dominated Programs. Res High Educ,2012; 53, 453–470. https://doi.org/10.1007/s11162-011-9237-0
28. Ellen PWA Jansen, Cor JM Suhre. The effect of secondary school study skills preparation on first-year university achievement, Educational Studies. 2010; 36:5, 569-580, DOI: 10.1080/03055691003729070
29. Wuthrich VM, Jagiello T, Azzi V. Academic Stress in the Final Years of School: A Systematic Literature Review. Child Psychiatry Hum Dev. 2020 Dec;51(6):986-1015. doi: 10.1007/s10578-020-00981-y. PMID: 32180075.
30. Michaela C. Pascoe, Sarah E. Hetric, Alexandrs G. Parker. The impact of stress on students in secondary school and higher education. International Journal of Adolescence and Youth. doi.org/10.1080/02673843.2019.1596823.

31. Alenazi FS, Hammad S, Mohamed AE. Prevalence of depression, anxiety and stress among male secondary school students in Arar city, Saudi Arabia, during the school year 2018. Electronic physician.2019; 11. 7522-7528. 10.19082/7522.
32. Al-Faris EA, Naeem N, McAleer S, Qureshi R, Vleuten C, Irfan F, Jamal A. Why a teacher centered medical school curriculum may result in a poor educational environment. Journal of Contemporary Medical Education 2 2014; 85-90.
33. Vogel S, Schwabe L. Learning and memory under stress: implications for the classroom. npj Science Learn;2016, 1, 16011. Available from: https://doi.org/10.1038/npjscilearn.2016.11
34. Stine E. The impact of perceived psychosocial environment and academic emotions on higher education students' intentions to drop out, Higher Education Research & Development. 2021; DOI: 10.1080/07294360.2021.1882404
35. DeJaeghere J, Duong B. Dao V. Teaching Practices That Support Thinking and Promote Learning: Qualitative Evidence from High and Low Performing Classes in Vietnam. Research on Improving System of Education. 2021; https://doi.org/10.35489/BSG-RISE-RI_2021/024
36. Grøtan K, Sund ER, Bjerkeset O. Mental Health, Academic Self-Efficacy and Study Progress Among College Students - The SHoT Study, Norway". Frontiers in Psychology.2019; 10:45. doi:10.3389/fpsyg.2019.00045
37. Fortman TL. The Effects of Body Image on Self-Efficacy, Self Esteem, and Academic Achievement A Senior Honors Thesis. 2006. Available from: https://core.ac.uk/download/pdf/76295683.pdf

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