ORIGINAL ARTICLE

Effect of Learning Styles on Self-Esteem and Stress Levels of University Students

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ABSTRACT

Background: Assessment of an individual about themselves is quite important because it effects in several ways in entire life including student life.
Aim: To assess the how the learning styles effects on self-esteem and stress levels of students.
Methodology: A cross-sectional study was carried out among second year, third year, fourth year and fifth year students of Psychology department of University of Karachi. All data were collected by means of interview. To determine self-esteem, Rosenberg's self-esteem scale was utilized, which is regarded as a highly reliable and valid tool for the quantitative assessment of self-esteem. The Stress Scale was used to measure the levels of perceived stress (feelings and thoughts) experienced by the participants during the past month. To examine the effect of awareness of learning styles (LS) among the students varied methods was used of learning. SPSS version 21 was used for data analysis keeping a p-value of <0.05 as statistically significant.
Results: There were a total of 240 students, 87 male and 153 were females. The students belong to middle and higher standards of living status. Results indicated that majority of students have normal self-esteem with high stress levels, which indicated that self-esteem may not always affecting level of stress, but it is the situation which might be affecting the self-esteem and stress. Furthermore, we observed that learning style greatly affects the level of self-esteem as well as stress. Visual and solitary learning style is most common among students in different educational year, while majority of students prefer visual style of learning.
Conclusion: Effect of learning styles on self-esteem and stress levels of students with educational year of the students was found to be significant.
Keywords: Learning style, assessment, level of student

INTRODUCTION

Educational performance has a remarkable effects of psychological wellbeing and due to the importance of this subject, it has been studied extensively along with impact of one`s self-esteem[1], self-efficacy[2], stress[3] and adopted style of learning[4]. Self-esteem is nothing but an attitude, that can be in favorable or against one`s self and that the self-efficacy linked with someone`s confidence regarding any skill or assigned task. In student`s life both of these factors have major role in academic performance[5]. If any student is under high levels of stress then it definitely impacts the level of self-esteem which is most probably inclined towards negativity than positivity[6]. More specifically, self-esteem lessened the detrimental effect of negative stressor assessments on daily negative effect[7]. Additionally, one area which is mostly ignored by researchers is learning style of students. The interaction of a particular teaching methodology with preferred learning styles of student may help the learner in learning. However, there are still contrasting findings regarding this claim[8].

In the present study, self-esteem represent personal variables, learning styles and stress represent environmental factors. Other studies have explored the impact of self-esteem on academic achievement and performance among health sciences students[9]. College or university life is a big transition from high school life for students. College life creates many challenges; they are to deal with unfamiliar faces and need to mingle in. Students learn to start socializing and develop opinions about themselves. Most of the time they learn to become more confident and composed, however, many students with low self-esteem cannot cope up with this new change[10]. Number of researches suggests Psycho Social Factors (PSFs) such as self-efficacy, learning behavior, motivation, self-esteem, academic stress and locus of control are predictors and facilitator forthcoming academic performance[11]. Lot of studies has been performed on the subject of self-esteem[12] in social psychology. Self-esteem development across adulthood has been in the center of interest for some time now. However, not much is known about factors that shape self-esteem and its development in the second half of life and whether the factors differ with age and gender[13]. Stress can also influence health throughout the lifespan. This is in part because "stress" is not a monolithic concept but rather, an emergent process that involves interactions between individual and environmental factors, historical and current events, and psychological and physiological reactivity[14]. Stress produce a negative impact on students' endurance levels, specifically in new mature students, it was suggested that stress decreases one`s self-esteem[15] and increase concern of failure. Finally stress negatively affects self-esteem, regardless of whether a person has depression. Conversely, low self-esteem makes individual prone to in experiencing stressful events through an indirect effect via depression[16].

Learning styles (LSs) show learning, correlating, and responding ability of students towards learning environment by Visuality, Auditory, Solitary, Verbal, Physical, Logical, and kinesthetic sensory abilities[17]. Several tools have been developed as a questionnaire to understand how anyone learn, for example visual, Aural, Read/Write, and Kinesthetic (VARK) questionnaire, etc.[18]. VARK learning style preferences (LSPs) are: Visual (looking at and making pictures, animations, graphs, tables, etc.); aural (listening to and participating in speeches, discussions, and question answer sessions); read/write (reading and writing text from books, lecture notes, laboratory reports, etc.) and kinesthetic (engaging in physical experiences, e.g., laboratories). This study is aimed at measuring stress levels, self-esteem, and assessing preferred learning styles among psychology students in Karachi, Pakistan.

METHODOLOGY

This prospective study was carried out by using non-probability convenient sampling techniqueat University of Karachi, Psychology Department. The study was carried out in six months after taking approval of synopsis by university's ethical and research committee.

Students from second, third, fourth and fifth educational year of psychology Department, age 21 years or above were included in this study. All the students were divided into two groups i.e., Self-esteem level according to learning style and Stress level according to learning style.

All data were collected by means of interview. Self-esteem was measured through highly reliable and valid tool of quantitative self-esteem assessment named as "Rosenberg's self-esteem scale". However, the levels of perceived stress (feelings and thoughts) were measured through "Stress Scale", for the past month among study participants. To examine the effect of awareness of learning styles (LS) among the students, diverse methods of learning were used. Data was collected through questionnaire and then entered and analyzed by using Statistical Package for Social Sciences (SPSS) version 21. Descriptive findings were presented as percentage of low, normal, high and average self-esteem and stress level as per learning styles of students. The nature of the study required the use of descriptive and comparative research methods. If value of P is less than 0.05, it is taken as statistically significant.

RESULTS

There were a total of 240 students,87 male and 153 females. A total of 114(47.5%) students were aged up to 21 years while 126 52.5%) were aged 22 years or above; 87(36.3%) were male while 153(63.7%) were females; 25(10.4%) were in second year, 68(28.3%) were in third year, 99(41.3%) were in fourth year while 48(20%) were in fifth year; 86(35.8%) lived in nuclear family system while 154(64.2%) lived in joint family system; 228(95%) were single while 11(4.6%) were married; 91(37.9) had visual learning style,19(7.9%) had auditory learning style, 43(17.9%) had solitary (intrapersonal) learning style, 27(11.3%) had social (interpersonal) learning style, 37(15.4%) had verbal (linguistic) learning style, 5(2.1%) had physical (kinesthetic) learning style while 18 (7.5%) had logical (mathematical) learning style; 59 (24.6%) had low level, 171(71.2%) had normal level while 10 (4.2%) had high level of self-esteem; 2 (0.8%) had no, 24 (10.0%) had low level, 95(39.6%) had average level while 119 (49.6%) had high level of stress (Table 1).

Table 1: Students Profile

Variable (n=240)	Count (%)
Age Group	
Up to 21 Years	114 (47.5)
22 Years or Above	126 (52.5)
Gender	
Male	87 (36.3)
Female	153 (63.7)
Educational Year	
Second	25 (10.4)
Third	68 (28.3)
Fourth	99 (41.3)
Fifth	48 (20.0)
Type of Family	
Nuclear	86 (35.8)
Joint	154 (64.2)
Marital Status	
Single	228 (95.0)
Married	11 (4.6)
Divorced	1 (0.4)
Learning Style	
Visual	91 (37.9)
Auditory	19 (7.9)
Solitary (Intrapersonal)	43 (17.9)
Social (Interpersonal)	27 (11.3)
Verbal (Linguistic)	37 (15.4)
Physical (Kinesthetic)	5 (2.1)
Logical (Mathematical)	18 (7.5)
Self-Esteem	
Low	59 (24.6)
Normal	171 (71.2)
High	10 (4.2)
Stress	
No	2 (0.8)
Low	24 (10.0)
Average	95 (39.6)
High	119 (49.6)

Table 2: Self-Esteem Level according to Learning Style (n=240

Variable	Self-Esteem		
	Low	Normal	High
	Count%	Count%	Count%
Learning Style			
Visual	25 (27.5)	60 (65.9)	6 (6.6)
Auditory	4 (21.1)	15 (78.9)	0 (0.0%)
Solitary (Intrapersonal)	11 (25.6)	31 (72.1)	1 (2.3)
Social (Interpersonal)	6 (22.2)	21 (77.8)	0 (0.0%)
Verbal (Linguistic)	6 (16.2)	31 (83.8)	0 (0.0%)
Physical (Kinesthetic)	1 (20.0)	2 (40.0)	2 (40.0)
Logical (Mathematical)	6 (33.3)	11 (61.1)	1 (5.6)

While analyzing self-esteem level of the students according to their learning styles it was seen that among students with visual learning style 25(27.5%) had low level, 60(65.9%) had normal level while 6(6.6%) had high level of self-esteem; among students with auditory learning style 4(21.1%) had low level, 15 (78.9%)had normal level while none had high level of self-esteem; among students with solitary (intrapersonal) learning style 11 (25.6%) had low

level, 31(72.1%)had normal level while 1(2.3%) had high level of self-esteem; among students with social (interpersonal) learning style 6(22.2%) had low level, 21(77.8%)had normal level while none had high level of self-esteem; among students with verbal (linguistic) learning style 6(16.2%) had low level, 31(83.8%)had normal level while none had high level of self-esteem; among students with physical (kinesthetic) learning style 1(20%) had low level, 2(40%)had normal level while 2(40%) had high level of self-esteem; and among students with logical (mathematical) learning style 6(33.3%) had low level, 11(61.1%)had normal level while 1(5.6%) had high level of self-esteem (Table 2).

While analyzing stress level of the students according to their learning styles it was seen that among students with visual learning style 8(8.8%) had no/low, 33(36.3%) had average while 50(54.9%) had high level of stress; among students with auditory learning style none had no/low, 8(42.1%)had average while 11(57.9%)had high level of stress; among students with solitary (intrapersonal) learning style 6(14%)had no/low, 15(34.9%)had average while 22(51.2%)had high level of stress; among students with social (interpersonal) learning style 4 (14.8%)had no/low, 16(59.3%) had average while 7 (25.9%)had high level of stress; among students with verbal (linguistic) learning style 4 (10.8%)had no/low, 16(43.2%)had average while 17(45.9%)had high level of stress; among students with physical (kinesthetic) learning style 2(40%)had no/low, 1(20%)had average while 2(40%)had high level of stress; and among students with logical (mathematical) learning style 2(11.1%)had no/low, 6(33.3%)had average while 10 (55.6%) had high level of stress (Table 3).

Table 3: Stress Level according to Learning Style (n=240)

Variable	Stress		
	No/Low	Average	High
	Count%	Count%	Count%
Learning Style			
Visual	8 (8.8)	33 (36.3)	50 (54.9)
Auditory	0(0.0%)	8 (42.1)	11 (57.9)
Solitary (Intrapersonal)	6 (14.0)	15 (34.9)	22 (51.2)
Social (Interpersonal)	4 (14.8)	16 (59.3)	7 (25.9)
Verbal (Linguistic)	4 (10.8)	16 (43.2)	17 (45.9)
Physical (Kinesthetic)	2 (40.0)	1 (20.0)	2 (40.0)
Logical (Mathematical)	2 (11.1)	6 (33.3)	10 (55.6)

DISCUSSION

Stress and self-esteem both are important players of our lives especially in pressurized environments[19]. University students when got admission, they must adjust to a new learning framework and are under great academic pressure, that may be the source of strain and acute stress[20]. A previous study explored factors related to student's performance, including self-esteem, family, other peoples' expectations, and learning styles; all of these are important in academic performance but the greatest impact on learning was due to self-esteem and stress level[21].

As mentioned in the Table 1, majority of the students (71.2%) fall under the group of normal self-esteem and according to Table 2, self-esteem found to be highly associated with visual mode of learning and 65.9% students with normal self-esteem and 6.6% with high self-esteem opt for visual learning style. 72.1% students prefer solitary that is intrapersonal style of learning with normal self-esteem and none of the high-esteem level student fall in this category. In all sub-groups of self-esteem, students prefer to use visual learning style, however, most of students like visual and solitary style of learning in having normal self-esteem. Based on our finding, learning style has great impact on self-esteem. Since long, educationists have been interested to find out the differences in students learning styles and focused on the most effective designs of teaching to enable fruitful learning[22].

Extensive material is available in literature about the learning styles and instruments to determine preferences and abilities of learners. These models are by and large based on senses (such as auditory, visual, or kinesthetic); personality treats; cognitive processing; or combination of all. A previous study described that students prefer the visual learning style as compared to verbal and active learning styles. Furthermore, they find a positive association between self-esteem, visual learning style and academic achievements[23].

Another amazing finding from our study is that those who like visual learning style showed to have very high level of stress. This indicates student opt of visual learning style have normal esteem and high level of stress. Similarly, Table 2 also showed that those who choose solitary learning style also have high percentage of people fall under high stress category. Therefore, when we associate learning style with self-esteem and stress, we observed those who opt for visual and solitary learning style, they not only have normal level of self-esteem but also have high level of stress. Secondly, we can speculate from our findings that high level of stress has positive impact on self-esteem in our students. Also, most of the students from any mode of learning showed to have average and high level of stress. This indicates in Pakistani students; stress doesn't affect so much that could decrease self-esteem. They are the students who are motivated with normal level of self-esteem.

CONCLUSION

This study revealed majority of undergraduate university students have normal self-esteem and high levels of stress in both genders. We observed learning styles have high association with both levels of self-esteem and stress. However, this perceived stress among students had no or little impact on self-esteem. Students most preferred way is visual and intrapersonal style of learning. It is recommended to have a large scale data that also contain the sources of stress and coping strategies among this group of students.

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