

# Impact of Self-efficacy on Psychological Distress among Engineering Youths

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**Abstract:** Transition phase is a challenging stage in the life of Engineering Youth. The problem of psychological distress such as stress, anxiety, depression has been exaggerated in this phase of life. A youth is surrounded by many Psychological distresses such as adjustment with the new environment, Academic Stress, Peer pressures, family expectation, and financial deficit etc. Youth's Self-efficacy acts as a survivor in this demanding phase of life. Self-efficacy is the ability to belief in one's own self. The aim of the present study is to find out the relationship between Self-efficacy, Stress, Anxiety, Depression and all-inclusive Psychological distress of engineering Youth from various disciplines. Pearson correlation, regression coefficient and Independent t-test is used to find out the relationship and difference between Self-efficacy (Independent variable) and Psychological distress (Dependent variable) of engineering Youth from various disciplines. A significant negative relationship was found between Independent and dependent variable. A high self-efficacious group has lesser psychological distress as comparison to low self-efficacious group of students. The regulation of self-help training programs which focuses on strengthening the mindful activities should be encompasses in the educational curriculum to enhance self-belief of the students.

**Keywords:** Self-efficacy, Stress, Anxiety, depression

## **Introduction:**

Young people's well-being and mental health is the matter of global concern. Broadly, the negative mental health indicators are Psychological distress characterized by depression, anxiety, Stress. It is evident that young people are under greater psychological distress than the general population. The level of psychological distress is prevalent in higher education globally. According to Horwitz (2007) there are deleterious effects of psychological distress on mental health and well-being, if it goes untreated at the early emotional state. It impact negatively on students learning. Although the mental health problems are prevalent across the society but young university students are prone to psychological distress due the multiple stressors such as academic workload, parents and teachers pressure, concern about future, financial burden, competition etc. These frequent stressors create stress, anxiety and depression among young students and affect their performance. It is clearly evident from the studies conducted in North America and Europe that college or university students reported a high degree of mental distress. Many studies are conducted on measuring the severe level of stress among

university students worldwide. Accurate Statistical data in the relation of Psychological health among Indian Youth is not present but 14.4 and 31.7 percent of Psychiatric morbidity is present among Indian Youth (WHO, 2005). The research conducted on urban South Indian Youth regarding mood disorders. The level of depression in Youth was from mild (37.1%) to moderate (19.4%) to severely depressed (4.3%) (Mohanraj R, Subbaiah K., 2010). It was found in one of the study on Indian males that 20% suffered from Stress; 24.4% suffered from Anxiety; 18.5% suffered from depression (Sahoo S, Khess CR., 2010). According to Mishra A, Sharma AK. (2001) 87% of anxiety and depression comorbidity was found in Indian people. Stress and depression were significantly connected to many problems over a period of time (Bhasin SK, Sharma R, Saini NK., 2010) such as Suicidal propensity (Lalwani S, Sharma GA, Kabra SK, Girdhar S, Dogra, 2004) and depressed psychosocial conditions like low academic performance etc. (Bhasin SK, Sharma R, Saini NK., 2010). According to Bandura (1977, 1986, 1997) an individual's Self-efficacy is the belief in his or her ability to execute behavior essential to produce a clear performance attainment. A research executed by Muris (2002) explores that there is a relationship between the level of self-efficacy and the level of anxiety and depression in adolescents. It is a pressing time to enhance the level of self-belief such as self-efficacy of the students so that they can face the hassles of day today life with self-confidence. Judgment to complete a task involves one's sheer ability and confidence. In the present study we are exploring the relationship between self-efficacy and psychological distress among engineering Youth.

#### **Objectives of the study:**

- (1) To find out the relationship between General Self-efficacy and all-inclusive Psychological distress (such as stress, anxiety, depression) of engineering Youths from various disciplines.
- (2) To find out the significant difference between low and high perceived self-efficacy and all-inclusive Psychological distress (such as Stress, Anxiety, Depression) of engineering Youth from various disciplines.

#### **Hypotheses of the study:**

- (1) There is a Significant Negative relationship between General self-efficacy and all-inclusive Psychological distress of Engineering Youth from various disciplines.
  - 1 (a) There is a Significant Negative relationship between General self-efficacy and Stress of Engineering Youth from various disciplines.
  - 1 (b) There is a Significant Negative relationship between General self-efficacy and Anxiety of Engineering Youth from various disciplines.
  - 1 (c) There is a Significant Negative relationship between General self-efficacy and Depression of Engineering Youth from various disciplines.
- (2) There is a significant difference between Low and high perceived self-efficacy and all-inclusive Psychological distress of engineering Youth from various disciplines.
  - 2 (a) There is a significant difference between Low and high perceived self-efficacy and Stress Psychological distress of engineering Youth from various disciplines.
  - 2 (b) There is a significant difference between Low and high perceived self-efficacy and Anxiety Psychological distress of engineering Youth from various disciplines.
  - 2 (c) There is a significant difference between Low and high perceived self-efficacy Depression

and Psychological distress of engineering Youth from various disciplines.

### **Research Method:**

#### **Sample Size**

Respondents in the present study are students (B.tech, M.tech and Ph.D.) of Indian Institute of Technology Roorkee, India. 177 participants return the questionnaire out of 200. Total response rate was (88.5%). There are 96 male students (54.2% of the sample) and 81 female students (45.7% of the sample) participated in the study. Entire Students voluntarily participated in the present study. There are 60 B.tech (51.28%) students comprised of 34 male (56.7%) and 26 female (43.3%) students; 59 M.tech (50.42%) students comprised of 32 male (54.2%) and 27 female (45.8%) students; 58 Ph.D. (49.57%) students comprised of 30 male (51.7%) and 28 female (48.3%) students included in the present research study. Age group of all the respondents in the present research is between 18-29 years. Age group of all the respondents are B.tech (18-22 years); M.tech (22-24 Years); Ph.D. (25-28 years). Demographic details are given in Table (1).

#### **Procedure & Statistical Analysis:**

Data of all the respondents were collected by using Questionnaire method. Convenience sampling technique was used in the present study to collect the data of respondents. All the Questionnaires were circulated in the classroom with the prior permission of Professor and students. Research data was empirically tested with the help of SPSS (20) and Microsoft Excel (2010). Correlation and regression is used to find out the relationship and Impact of General self-efficacy on Stress, Anxiety, Depression and all-inclusive Psychological distress. Independent T-test is used to for acceptance and rejection of Hypothesis.

### **Measures**

#### **General Perceived Self-efficacy**

In this study the General Self-Efficacy (GSE) Scale recognized by Schwarzer & Jerusalem (1995), it is verified in sample from 25 nations, including India with Cronbach's alphas ranged from 0.75 to 0.91 (Scholz, Dona, Sud & Schwarzer, 2002). It was functional to assess the Individual's self-efficacy to evaluate the coping with daily life stresses. This scale is comprised of 10-items on a range from 1 (not at all true) to 4 (exactly true), on a 4-point Likert scale. Total score achieved by the participants is 40. Higher score of participants represent higher self-efficacy. The Median score of General self-efficacy is (Mdn) 30. Students who score above median value (Mdn>30) are grouped in the category of high self-efficacy and those who perform below median value (Mdn<30) are grouped in the category of low self-efficacy.

#### **Psychological Distress**

##### **DASS-21**

The DASS-21 is a short-form of the DASS in which each of the three dimensions comprises seven items (Lovibond & Lovibond, 1995). According to Henry & Crawford (2005) DASS-21 has a greater reliability and has a factor arrangement that is consistent with the division of the items to subscales, and divulges high convergent validity with other measures of depression and anxiety. DASS-21 is a short version of 42-items self-report measurement instrument articulated to measure the three associated negative emotional situations such as depression, anxiety, and stress. DASS-21 item scale measured on a four-point rating scale (0-3), "0" indicate "did not apply to me at all" and "3" indicate "applied to me very much, or most of the time". The accepted Internal consistency (Cronbach alpha) for DASS-21 is Depression (English: 0.76; Hindi: 0.70); Anxiety (English: 0.73; Hindi: 0.74); Stress (English: 0.71; Hindi: 0.63).

**Table1: Frequency distribution of Engineering Students**

Courses	Age		Frequency	Percent
B.tech	18-21	male	34	56.7
		Female	26	43.3
		<b>Total</b>	<b>60</b>	<b>100</b>
M.tech	22-25	male	32	54.2
		Female	27	45.8
		<b>Total</b>	<b>59</b>	<b>100</b>
Ph.D.	25-29	male	30	51.7
		Female	28	48.3
		<b>Total</b>	<b>58</b>	<b>100</b>

### Descriptive Statistics

The mean value and standard deviation of different variables are being represented under descriptive analysis. The mean value and the standard deviation of General self-efficacy is (M=30.166, SD=4.82); Stress (M=14.76, SD=7.94); Anxiety (M=11.83, SD=6.51); Depression (M=12.80, SD=6.89) for B.tech students (18-21 years). General self-efficacy is (M=30.20, SD=4.26); Stress (M=14.23, SD=6.66); Anxiety (M=11.18, SD=6.04); Depression (M=12.20, SD=7.76) for M.tech

students (22-24 years). General self-efficacy is (M=29.41, SD=4.88); Stress (M=15.55, SD=8.29); Anxiety (M=11.10, SD=6.53); Depression (M=12.96, SD=7.61) for Ph.D. students (25-29 years). A visual inspection of histogram, normal Q-Q plots and box plot indicated that the self-efficacy (IDV), Stress, anxiety, depression and all-inclusive psychological distress (DV) were approximately normally distributed. Further, the value of Skewness and kurtosis was between (+1.96 to -1.96).

**Table 2: Descriptive analysis of different variables**

Age	Courses		Mean	SD	Skewness		Kurtosis	
			Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
18-21	B.tech	GSE	30.1667	4.82636	-.236	.309	-.923	.608
		Stress	14.7667	7.94124	.593	.309	-.301	.608
		Anxiety	11.8333	6.51769	.508	.309	-.248	.608
		Depression	12.8000	6.89092	.587	.309	.077	.608
		N	60					
22-25	M.tech	GSE	30.2034	4.26606	-.093	.311	-.783	.613
		Stress	14.2373	6.66524	.471	.311	.381	.613
		Anxiety	11.1864	6.04716	.610	.311	-.284	.613
		Depression	12.2034	7.76992	.492	.311	-.397	.613
		N	59					
25-29	Ph.D.	GSE	29.4138	4.88116	-.018	.314	-.820	.618
		Stress	15.5517	8.29113	.308	.314	-.617	.618
		Anxiety	11.1034	6.53651	.423	.314	-.471	.618
		Depression	12.9655	7.61569	.537	.314	-.218	.618
		N	58					

## Results:

### Hypothesis

**(1) There is a Significant Negative relationship between General self-efficacy and all-inclusive Psychological distress of Engineering Youth from various disciplines.**

The analysis of Pearson product moment correlation coefficient between General self-efficacy (GSE) and Psychological Distress (PD) of B.tech students is  $r_{(177)} = -.664$ ;  $P < 0.01$ ; M.tech students is  $r_{(177)} = -.549$ ;  $P < 0.01$ ; Ph.D students is  $r_{(177)} = -.512$ ;  $P < 0.01$ . It is evident from **Table (3)** that there is a significant inverse relationship recognized between General self-efficacy (GSE) and Psychological Distress (PD). Thus, the Hypothesis is accepted. Inverse relationship indicates that Self-belief and Self-confidence helps an individual in overcoming challenges and distress of daily life. A Simple regression was conducted to investigate how well general Self-efficacy predicts Psychological distress. The regression coefficient result of B.tech students is  $F(1, 58) = 45.827$ ;  $R^2 = .441$ ;  $Adj.R^2 = .432$ ;  $P = .000$ ; M.tech students is  $F(1, 57) = 24.592$ ;  $R^2 = .301$ ;  $Adj.R^2 = .289$ ;  $P = .000$ ; Ph.D. students is  $F(1, 56) = 19.913$ ;  $R^2 = .262$ ;  $Adj.R^2 = .249$ ;  $P = .000$  explain that 43.2% ; 28.9% ; 24.9% of the variance in Psychological distress is explained by General self-efficacy among young engineers students of various programme. (**Represented in Table 4**).

A similar finding was found by (Tong and Song, 2004; Yu et al., 2005) stated that there is a positive relationship between higher general self-efficacy and well-being of college students. Quimby and O'Brien (2006) and lightsay and Barnes (2007), they also claim that self-efficacy is inversely predict Psychological distress among college students.

**Hypothesis 1(a). There is a Significant Negative relationship between General self-efficacy and Stress of Engineering Youth from various disciplines.**

The analysis of Pearson product moment correlation coefficient between General self-efficacy (GSE) and Stress of B.tech students is  $r_{(177)} = -.589$ ;  $P < 0.01$ ; M.tech students is  $r_{(177)} = -.456$ ;  $P < 0.01$ ; Ph.D students is  $r_{(177)} = -.487$ ;  $P < 0.01$ . It is evident from **Table (3)** that there is a significant inverse relationship recognized between General self-efficacy (GSE) and Stress. Thus, the Hypothesis is accepted. A Simple regression was conducted to investigate how well general Self-efficacy predicts Psychological distress. The regression coefficient result of B.tech students is  $F(1, 58) = 30.793$ ;  $R^2 = .347$ ;  $Adj.R^2 = .336$ ;  $P = .000$ ; M.tech students is  $F(1, 57) = 15.005$ ;  $R^2 = .208$ ;  $Adj.R^2 = .194$ ;  $P = .000$ ; Ph.D. students is  $F(1, 56) = 17.404$ ;  $R^2 = .237$ ;  $Adj.R^2 = .223$ ;  $P = .000$  explain 33.6% ; 20.8% ; 22.3% of the variance in Stress is explained by General self-efficacy among young engineers students of various programme. (Represented in **Table 4**).

A small deviance from the undesirable conditions will help the youth to get out of challenging life. Stress is a natural part of our life. A certain amount of stress will helpful for students to lead a better result. When the level of stress increases beyond tolerance it will lead to unfavorable results that affect individual's physical, mental and emotional progress. High Self-efficacy helps students to reduce the negative impact of Stress. Similar findings were investigated by Quimby and O'Brien (2006) and lightsay and Barnes (2007) they also assert that self-efficacy is inversely related to stress among college students. There is a significant negative correlation found between self-efficacy and stress (Hackett et al., 1992; Newby-Fraser and Schlebusch, 1997).

**Hypothesis 1 (b). There is a Significant Negative relationship between General self-efficacy and Anxiety of Engineering Youth from various disciplines.**

The analysis of Pearson product moment correlation coefficient between General self-efficacy (GSE) and Anxiety of B.tech students is  $r_{(177)} = -.634$ ;  $P < 0.01$ ; M.tech students is  $r_{(177)} = -.521$ ;  $P < 0.01$ ; Ph.D students is  $r_{(177)} = -.468$ ;  $P < 0.01$ . It is evident from **Table (3)** that there is a significant inverse relationship recognized between General self-efficacy (GSE) and Stress. Thus, the Hypothesis is accepted. A Simple regression was conducted to investigate how well general Self-efficacy predicts Psychological distress. The regression coefficient result of B.tech students is  $F(1,58) = 38.946$ ;  $R^2 = .402$ ;  $Adj.R^2 = .391$ ;  $P = .000$ ; M.tech students is  $F(1,57) = 21.288$ ;  $R^2 = .272$ ;  $Adj.R^2 = .259$ ;  $P = .000$ ; Ph.D. students is  $F(1,56) = 15.675$ ;  $R^2 = .219$ ;  $Adj.R^2 = .205$ ;  $P = .000$  explain that 39.1% ; 25.9% ; 20.5% of the variance in Anxiety is explained by General self-efficacy among young engineers students of various programme. **(Represented in Table 4).**

Anxiety spurt due to increase in fear or phobia among Youth. A strong self-belief helps students to challenge with the level of anxiety and come out of difficult situations efficaciously. Similar findings were investigated by Quimby and O'Brien (2006) and lightsay and Barnes (2007) they also assert that self-efficacy is inversely related to Psychological anxiety among college students. A significant negative correlation found between anxiety and self-efficacy (Jing, 2007).

**Hypothesis 1(c). There is a Significant Negative relationship between General self-efficacy and Depression of Engineering Youth from various disciplines.**

The analysis of Pearson product moment correlation coefficient between General self-efficacy (GSE) and Depression of B.tech students is  $r_{(177)} = -.574$ ;  $P < 0.01$ ; M.tech students is  $r_{(177)} = -.464$ ;  $P < 0.01$ ; Ph.D students is  $r_{(177)} = -.442$ ;  $P < 0.01$ . It is evident from **Table (3)** that there is a significant inverse relationship recognized between General self-efficacy (GSE) and Depression. Thus, the Hypothesis is accepted. A Simple regression was conducted to investigate how well general Self-efficacy predicts Psychological distress. The regression coefficient result of B.tech students is  $F(1,58) = 28.476$ ;  $R^2 = .329$ ;  $Adj.R^2 = .318$ ;  $P = .000$ ; M.tech students is  $F(1,57) = 15.656$ ;  $R^2 = .215$ ;  $Adj.R^2 = .202$ ;  $P = .000$ ; Ph.D. students is  $F(1,56) = 13.619$ ;  $R^2 = .196$ ;  $Adj.R^2 = .181$ ;  $P = .000$  explain that 31.8% ; 20.2% ; 18.1% of the variance in Depression is explained by General self-efficacy among young engineers students of various programme. **(Represented in Table 4).**

Self-efficacy helps Youth to avoid adverse repercussions of depression. A similar finding was proposed by Quimby and O'Brien (2006) and light says and Barnes (2007) they found that self-efficacy is inversely related to depression among college students. When person's has a low self-confidence such as a low self-efficacy to regulate their contemplative thoughts then it manifested into low self-worth and consequently over a period of time reiteration of depressive incidents may be drifted (Kavanagh & Wilson, 1989).

**Table 3:** Relationship between General self-efficacy, Stress, Anxiety, Depression and all-inclusive psychological distress among Engineering Youth of Different Programmes

Courses	S.no	Variables	1	2	3	4	5
			GSE	Stress	Anxiety	Depression	PD
B.Tech	1	GSE	1	-.589**	-.634**	-.574**	-.664**
	2	Stress		1	.688**	.747**	.915**
	3	Anxiety			1	.702**	.875**
	4	Depression				1	.906**
	5	PD					1
M.Tech	1	GSE	1	-.456**	-.521**	-.464**	-.549**
	2	Stress		1	.588**	.649**	.855**
	3	Anxiety			1	.668**	.849**
	4	Depression				1	.904**
	5	PD					1
Ph.D.	1	GSE	1	-.487**	-.468**	-.442**	-.512**
	2	Stress		1	.745**	.790**	.939**
	3	Anxiety			1	.675**	.879**
	4	Depression				1	.910**
	5	PD					1

\*\*P<.001 General Self-efficacy (GSE);Psychological distress (PD)

**Table 4:** Regression equation; General self-efficacy as Predictor of Stress, Anxiety, Depression and all-inclusive Psychological distress

Courses	Variable	R <sup>2</sup>	Adj.R <sup>2</sup>	F-Value	B	Std.Error	β	T-value	Sig-Value
B.Tech	Stress	.347	.336	30.793	-.969	.175	-.589	-5.549	.000**
	Anxiety	.402	.391	38.946	-.856	.137	-.634	-6.241	.000**
	Depression	.329	.318	28.476	-.819	.154	-.574	-5.336	.000**
	PD	.441	.432	45.827	-2.644	.391	-.664	-6.770	.000**
M.tech	Stress	.208	.194	15.005	-.713	.184	-.456	-3.874	.000**
	Anxiety	.272	.259	21.288	-.739	.160	-.521	-4.614	.000**
	Depression	.215	.202	15.656	-.845	.214	-.464	-3.957	.000**
	PD	.301	.289	24.596	-2.298	.463	-.549	-4.959	.000**
Ph.D.	Stress	.237	.223	17.404	-.827	.198	-.487	-4.172	.000**
	Anxiety	.219	.205	15.675	-.626	.158	-.486	-3.959	.000**
	Depression	.169	.181	13.679	-.690	.187	-.442	-3.690	.000**
	PD	.262	.249	19.913	-2.143	.480	-.512	-4.462	.000**

\*\*P<.01

PD-Psychological distress

**(2) There is a significant difference between Low and high perceived self-efficacy and all-inclusive Psychological distress of engineering Youth of various disciplines.**

The result of Independent T-test for B.tech students is  $t_{(54.1)} = 6.109$ ;  $P=.000$  with  $M=49.87$ ,  $SD=18.11$  for low efficacious group and  $M=26.59$ ,  $SD=11.13$  for high efficacious group; M.tech students Independent-t test is  $t_{(57)} = 4.243$ ;

$P=.000$  with  $M=45.87$ ;  $SD=17.93$  for low efficacious group and  $M=28.50$ ;  $SD=12.77$  for high efficacious group; Ph.D. students Independent-t test is  $t_{(55.5)} = 5.696$ ;  $P=.000$  with  $M=47.89$ ;  $SD=20.18$  for low efficacious group and  $M=25.04$ ;  $SD=10.32$  for high efficacious group. There is a significant difference between Low and high perceived self-efficacy and all-inclusive Psychological distress of engineering

Youth from various disciplines. Thus, Hypothesis is accepted (**represented in Table 4**). High self-efficacy group can face the daily challenges with strong self-belief and able to minimize the negative consequences of day today life and whereas Individual's with low self-efficacy demotivate and dishearten whenever confront with the challenges of their life. In the current study, it is predicted that Students with low self-efficacy are more prone to Psychological Distress. B.tech students are more prone to Psychological Distress followed by Ph.D. and M.tech. Students(**represented in table 5**).

**2 (a) There is a significant difference between Low and high perceived self-efficacy and Stress of engineering Youth from various disciplines.**

The result of Independent T-test for B.tech students is  $t_{(52,4)} = 5.131$ ,  $P=.000$  with  $M=18.60$ ,  $SD=8.06$  for low efficacious group and  $M=10.07$ ,  $SD=4.62$  for high efficacious group; M.tech students Independent-t test is  $t_{(57)} = 2.475$ ;  $P=.015$  with  $M=16.19$ ,  $SD=7.12$  for low efficacious group and  $M=12.07$ ,  $SD=5.45$  for high efficacious group; Ph.D. students Independent-t test is

$t_{(55,04)} = 5.209$ ;  $P=.000$  with  $M=18.81$ ;  $SD=8.00$  for low efficacious group and  $M=9.80$ ,  $SD=5.13$  for high efficacious group. There is a significant difference between Low and high perceived self-efficacy and Stress among engineering Youth from various disciplines. Thus, Hypothesis is accepted(**represented in Table 4**). In low self-efficacy group the level of Stress is more in Ph.D. students followed by B.tech and M.tech students. It is predicted in the present study that Student with low self-efficacy are more prone to Psychological Distress or vice-versa(**represented in table 5**).

**2 (b) There is a significant difference between Low and high perceived self-efficacy and Anxiety of engineering Youth from various disciplines.**

The result of Independent T-test for B.tech students is  $t_{(54,8)} = 5.946$ ,  $P=.000$  with  $M=15.33$ ,  $SD=6.15$  for low efficacious group and  $M=7.55$ ,  $SD=3.89$  for high efficacious group; M.tech students Independent-t test is  $t_{(50,9)} = 4.254$ ;  $P=.000$  with  $M=13.93$ ,  $SD=6.33$  for low efficacious group and  $M=8.14$ ,  $SD=3.96$  for high efficacious group; Ph.D. students Independent-t test is  $t_{(55,9)} = 4.189$ ;  $P=.000$  with  $M=13.24$ ,  $SD=6.77$  for low efficacious group and  $M=7.33$ ,  $SD=3.96$  for high efficacious group. There is a significant difference between Low and high perceived self-efficacy and Anxiety among engineering Youth from various disciplines. Thus, Hypothesis is accepted(**represented in Table 4**). In low self-efficacy group the level of Anxiety is more in B.tech students followed by M.tech and Ph.D. students. It is proposed that Students with low self-efficacy are more prone to Anxiety and vice-versa(**represented in table 5**).

**2 (c) There is a significant difference between Low and high perceived self-efficacy and Depression of engineering Youth from various disciplines.**

The result of Independent T-test for B.tech students is  $t_{(56,3)} = 4.660$ ,  $P=.000$  with  $M=7.96$ ,  $SD=3.43$  for low efficacious group and  $M=4.48$ ,  $SD=2.34$  for high efficacious group; M.tech students Independent-t test is  $t_{(57)} = 4.100$ ;  $P=.000$  with  $M=8.06$ ;  $SD=4.18$  for low efficacious group and  $M=4.14$ ,  $SD=2.99$  for high efficacious group; Ph.D. students Independent-t test is  $t_{(55,7)} = 4.955$ ;  $P=.000$  with  $M=7.94$ ;  $SD=3.82$  for low efficacious group and  $M=3.95$ ,  $SD=2.31$  for high efficacious group. There is a significant difference between Low and high perceived self-efficacy



and Anxiety among engineering Youth from various disciplines. Thus, Hypothesis is accepted (represented in Table 4). In low self-efficacy group the level of Depression is more in M.tech

students followed by B.tech and Ph.D. students. It is proposed that Students with low self-efficacy are more prone to Depression and vice-versa (represented in table 5).

**Table 4:** Independent T-test: Difference between Low and High Self-efficacy in predicting Stress, Anxiety, depression and all-inclusive psychological distress of engineering Youth from various disciplines.

Courses		GSE	N	Mean	SD	Std.Error Mean	T-value	df	P-value	
B.tech	Stress	low	33	18.60	8.06	1.4	5.131	52.4	.000**	
		high	27	10.07	4.62	.88				
	Anxiety	low	33	15.33	6.15	1.07	5.946	56.3	.000**	
		high	27	7.55	3.89	.74				
	Depression	low	33	7.96	3.43	.59	4.660	56.1	.000**	
		high	27	4.48	2.34	.45				
	PD	low	33	49.87	18.11	3.15	6.109	54.1	.000**	
		high	27	26.59	11.13	2.14				
	M.tech	Stress	low	31	16.19	7.12	1.27	2.475	57	.015**
			high	28	12.07	5.45	1.03			
Anxiety		low	31	13.93	6.33	1.13	4.254	50.9	.000**	
		high	28	8.14	3.96	.74				
Depression		low	31	8.06	4.18	.75	4.100	57	.000**	
		high	28	4.14	2.99	.56				
PD	low	31	45.87	17.93	3.22	4.243	57	.000**		
	high	28	28.50	12.77	2.41					
Ph.D.	Stress	low	37	18.81	8.00	1.31	5.209	55.0	.000**	
		high	21	9.80	5.13	1.12				
	Anxiety	low	37	13.24	6.77	1.11	4.189	55.9	.000**	
		high	21	7.33	3.96	.86				
	Depression	low	37	7.94	3.82	.62	4.955	55.7	.000**	
		high	21	3.95	2.31	.504				
	PD	low	37	47.89	20.18	3.31	5.696	55.5	.000**	
		high	21	25.04	10.32	2.25				

\*\*p<0.01

PD-Psychological distress

**Table 5:** Interpretation of the level of Stress, Anxiety, depression and all-inclusive Distress with low and high self-efficacious Engineering Youth from various Disciplines

Courses	GSE	Interpretation	Remark	
Stress	B.tech	low	<b>Low self-efficacy group : Ph.D.&gt;B.tech&gt;M.tech</b> High self-efficacy group: M.tech>B.tech>Ph.D. It is Proposed that Students with low self-efficacy are more prone to Stressful situation or vice-versa. In low self-efficacy group the level of Stress is more in Ph.D. students followed by B.tech and M.tech students.	<b>B.tech</b> students are more susceptible to Anxiety
		high		
	M.tech	low		
		high		
	Ph.D.	low		
		high		
Anxiety	B.tech	low	<b>Low self efficacy group: B.tech&gt;M.tech&gt;Ph.D.</b> High self-efficacy group: M.tech>B.tech>Ph.D. It is Proposed that Students with low self-efficacy are more prone to Anxiety. In low self-efficacy group the level of Anxiety is more in B.tech students followed by M.tech and Ph.D. students.	<b>M.tech</b> Students are more susceptible to Depression  <b>Ph.D.</b> Students are more susceptible to Stress
		high		
	M.tech	low		
		high		
	Ph.D.	low		
		high		
Depression	B.tech	low	<b>Low self-efficacy group: M.tech&gt;B.tech&gt;Ph.D.</b> High self-efficacy group: B.tech>M.tech>Ph.D. It is Proposed that Students with low self-efficacy are more prone to Depression. In low self-efficacy group the level of Depression is more in M.tech students followed by B.tech and Ph.D. students.	
		high		
	M.tech	low		
		high		
	Ph.D.	low		
		high		
PD* (comorbidity)	B.tech	low	<b>Low self-efficacy group : B.tech&gt;Ph.D.&gt;M.tech</b> High self-efficacy group: M.tech>B.tech>Ph.D. It is Proposed that Students with low self-efficacy are more prone to Psychological Distress. B.tech students are more prone to Psychological Distress followed by Ph.D. and M.tech. Students.	
		high		
	M.tech	low		
		high		
	Ph.D.	low		
		high		

\*PD-Psychological distress

**(Comorbidity)** is the appearance of more than one ailment in the same individual. For instance, if an individual is diagnosed with both anxiety disorder and depressive disorder is known as comorbid.

### **Discussion:**

Stress and depression arises due to continuous thought pattern in the negative direction. One needs to control the speed of thoughts. The mechanism to control the frequent thought is perceived self-efficacy; its intervention will control and regulate the frequency of thoughts with precise vibration and instantly reduces the effect of stress and depression. The major source of distress is not only the absolute frequency of disturbing thoughts but also the perceived helplessness to turn them off (Kent & Gibbons, 1987). To decrease the level of anxiety and avoidant behavior (Ozer & A. Bandura, 1990) both regulating thought efficacy and perceived coping efficacy is helpful. Previous researches have proposed that if a person belief that he/she has capability to control the consequence of the particular situation then self-efficacy of an Individual play an important role in managing and controlling the level of stress (Shelley and Pakenham 2004; Abouserie 1994; Wiedenfeld et al. 1990).

Students are prone to the regular class test, assignment, presentation that will lead to anxiousness, nervousness, uneasiness, apprehension that refers anxiety state (Spielberger and Sarason, 1989) situation precise characteristics. There are many students whose performance reduced due to severe anxiety level affected by both internal and external stimulus. Symptom such as sweaty palms, tensions in muscles, unnecessary movement etc. are some of the symptoms of anxious students during exam or any tough situation of life. During this phase a

complete disruption of operative cognitive control and trouble in the effective thought process (Freidman & Bendas-Jacob, 1997). Students with low level of self-efficacy could not be able to manage their performance in academics and simultaneously their overall level of achievement will be declined. Researches have suggested that students past success and failure in academics stimulate the level of anxiety through the consequence of their perceived self-efficacy (Meece, Wigfield, Eccles, 1990). If the past failure disturbs the confidence such as self-efficacy of students then they felt incessant anxiousness about their academic outcome whereas if students sustain the level of self-efficacy and not anxious by failure they endure tranquility both internally and externally.

Psychological distress is pervasive among all the engineering Youth. In the present study all-Inclusive Psychological distress in B.tech participants was found to be high followed by Ph.D. and M.tech participants. The result of the study comprehend that Students with low self-efficacy are more susceptible to stress, anxiety and depression in each discipline. Precisely, B.tech students with low self-efficacy are more anxious; M.tech students with low self-efficacy are more depressive whereas Ph.D. students with low self-efficacy are under Stress. There are many reasons for psychological distress but one prevalent reason is low level of self-efficacy. B.tech students come out of their comfortable zone for the first time. Thus, the adjustment with hostel life, score high academic grade and expectation of parents and society are the possible reason of Psychological distress among B.tech students. Whereas, the level of problems and difficulties are not less for M.tech and Ph.D. students. They are also going through many problems such as searching for adequate job, financial crises, family pressure, and peer group pressure etc.

An Individual with high self-efficacy makes a better decision with optimistic attitude. They can face the challenges of their life with strong persistence as comparison to low-self-efficacious group. There are a number of factors that influence the connection between psychological distress and self-efficacy among youth. Internal factors like self-concept, self-esteem, optimism and External resources like social identity or social support need to be reinforced to protect one's self-efficacy (Bovier, Chamot, & Perneger, 2004; Hausser, Kattensbroth, van Dick, & Mojzisch, 2012; Lai, 2009).

It is important to nurture cognitive abilities and self-regulative expertise of the students that are helpful in dealing with academic assignment and self-destructive thought patterns. It was proposed in the previous literature that students who were suffering from depression produces a deficiency of following symptoms; less social interaction, loneliness, fewer response time and less social interaction than their friends (Gayman, Turner, Cislo, Elissen, 2011).

### **Conclusion:**

If student don't comprehend the power of self-efficacy immediately there was a severe increment in the symptoms associated with the level of stress such as acceleration of heart rate, blood pressure level increases, stress related hormones increases and rapid decline in the overall immunity (A. Bandura, 1988). As soon as the students recapitulates his/her belief such as self-efficacy guided by mastery experiences they acquired ability to tackle with the same situation without indulging much into the negative consequences of stress. Avoidance behavior and anxiety stimulation can be controlled by perceived self-efficacy. The bolder action to fight against strenuous and difficult situation can be produced by encouraging a sense of strong coping

self-efficacy (A. Bandura, 1988). High Self-efficacy is imperative to beat the consequences of psychological distress in Youth.

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