
VIDYASAGAR UNIVERSITY



Perception of student mental stress

Roll No: - 1126116-200129

Registration No: - 1160393

Session: - 2020-2021

Paper:-DSE- 4(Project work)

ACKNOWLEDGEMENTS:

I am grateful to all the individuals who played a role in the successful completion of my project at the Department of Statistics, Haldia Government College. I would like to express my sincere appreciation to my project guide, Dr Shyamsundar Sahoo, as well as Mr. Sibsankar Karan, Mr. Tanmay Maity and Mr. Bijitesh Halder for their unwavering support, patience, motivation, and profound knowledge. Their guidance and assistance were invaluable throughout the project's computation and writing stages, and I couldn't have asked for a better mentor.

Furthermore, I am indebted to my friends and professors at Haldia Government College and Vidyasagar University for their encouragement and motivation in all aspects of my project's completion. Lastly, I would like to express my deepest appreciation to my family for their endless love and unwavering support throughout my academic and personal life. This achievement would not have been possible without their unwavering support.

Context -

- **Introduction**
 - **Objective**
 - **Factor**
 - **Data collection**
 - **About the data**
 - **Methodology**
 - **Result and Conclusion**
 - **References**
-

Introduction:-

Stress is defined as the body's non-specific response to demands made upon it or to disturbing events in the environment. It is not just a stimulus or a response but rather, it is a process by which individuals perceive and cope with environmental threats and challenges. In small amounts, stress is normal and can help individuals to be more active and productive. However, very high levels of stress experienced over a prolonged period can cause significant mental and physical problems.

Academic stress is defined as the body's response to academic-related demands that exceed adaptive capabilities of students.² It is estimated that 10–30% of students experience some degree of academic stress during their academic career.³ Indeed, academic stress among students enrolled in highly academic standards universities has a major impact. According to the American College Health Association 2006 survey of college students, the one greatest health obstacle to college students' academic performance was academic stress. Of the 97,357 college students who participated in the survey, 32% reported that academic stress had resulted in an incomplete, a lower grade. Most commonly reported stressors in the academic environment are related to oral presentations, academic overload, lack of time to meet commitments and taking examinations.

Indeed, stress can be augmented even more when students leave their parents and attend far from home college and university for the first time, as it has been found that psychological symptoms, including stress, were commonly manifested among first-year college students. Another stress-inducing factor is the highly competitive educational environment existing in the preparatory years. In a study demonstrating the dark side of competition, that they elevated competitive behavior or people feeling that they have become too inferior may increase vulnerability to depression, anxiety and stress. In another study, Field investigated the

stress effect on high-pressure college preparatory school students and reported that there are high prevalence's of harmful physical and psychological correlates of stress and related unhealthy behaviors, such as widespread and chronic sleep deprivation.

Objective:-

- Which factor is mostly responsible for stress in academic
- Whom(Boys and Girls) is most suffer from academic stress

Factor:-

- Sex
- Residency
- Income
- Father Qualification
- Mother Qualification

Data collection:-

I have investigate that which factor is mainly responsible for student mental stress so I am collect the data from HALDIA GOVERNMENT COLLEGE Statistics Dept, Anthropology Dept, Geography Dept, English Dept, Bengali Dept and etc.

About the data:-

SAAS (The Scale for assessing academic stress) was used to assess student perceived stress. SAAS is a 30 item self report tool with “YES” or “NO” answer. Each item was given 1 point for “YES” with a total score of 30 and 0 for lowest or no stress. All dimensions of possible human manifestation of stress were covered by SAAS tool, including cognitive, affective, social\interpersonal, physical and emotional aspects.

- Difficult To Concentrate
 - Forget Easily
 - Day Dream A Lot
 - Difficult In Problem Solving
 - Don't Answer The Question in The Class
 - Doubt Own Abilities
 - Hesitate To Discuss Problem With Teacher
 - Feel Inferior
 - Lack Of Confidence
 - Feel Under Pressure
 - Fear Of Failure
 - Worry About Parents Expectation
 - Over Thinking About The Future
 - Get Headache
 - Get Nervous Easily
 - Less Desire To Eat
 - Lack Of Sleep
 - Normally Fast Heartbeat
 - Nobody To Help
 - Get Irritated With Everyone
 - Feeling Hesitant To Talk With Anyone
 - Like To Stay Alone
 - Nobody Understood You
-

- Lack In Interest In Study
- Not Enjoying Extra Curricular Activities
- Difficulty In Completing Lessons
- Get Bored Easily
- Lack In Work Continuity
- Do Not Feel Like Going To College
- Feel Sleepy In Work(Class)

Methodology:-

The data have been analyzed by analysis of variance (ANOVA) tests were used to test the spearman rank correlation between the factor. P value of <0.05 was considered statistical signature

Result:-

A total no 138 students take part in the questionnaire among themselves 41 were male with average age 20 and 97 were female with average age 19

1) Anova: Male & Female

SUMMARY				
Groups	Count	Sum	Average	Variance
Column 1	41	510	12.43902	29.55244
Column 2	97	1098	11.31959	37.78222

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F critical value
Between Groups	36.114	1	36.114	1.021275	0.314011	3.910747
Within Groups	4809.19	136	35.36169			
Total	4845.304	137				

P value is less than 0.05 so this reject the null

So we conclude that both of male and female have the same chance to stress

2) The ANOVA test for residence and sum of the SAAS score

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
RESIDENCE				
(U=1,R=0)	138	45	0.326087	0.221358
Total	138	1608	11.65217	35.36719

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	8851.337	1	8851.337	497.4262	1.55E-63	3.875621
Within Groups	4875.63	274	17.79427			
Total	13726.97	275				

P value less than 0.05 so we accept the null

It means residency is involved for student mental stress

1) ANOVA: Mother Qualification

SUMMARY				
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	17	215	12.64706	42.61765
Column 2	61	709	11.62295	27.7388
Column 3	37	419	11.32432	48.78078
Column 4	19	216	11.36842	36.35673
Column 5	3	41	13.66667	20.33333
Column 6	1	8	8	0

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Between Groups	47.8983	5	9.57966	0.263583
Within Groups	4797.406	132	36.34399	
Total	4845.304	137		

P value is greater than 0.05

So we reject the null hypothesis

It means student mental stress does not depend in mother qualification

3) Anova:Father Qualification

SUMMARY				
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	16	220	13.75	60.06667
Column 2	47	509	10.82979	29.62257
Column 3	36	409	11.36111	33.66587
Column 4	29	344	11.86207	34.19458
Column 5	9	118	13.11111	38.36111
Column 6	1	8	8	0

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	139.0233	5	27.80467	0.779855	0.56592	2.282856
Within Groups	4706.281	132	35.65364			
Total	4845.304	137				

student mental stress does not depend in father qualification

because p value is greater than 0.05

4)ANOVA: Single
Factor(years)

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Column 1	42	419	9.97619	39.43844
Column 2	73	918	12.57534	30.44216
Column 3	23	271	11.78261	38.90514

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
Between Groups	180.5795	2	90.28975	2.613041
Within Groups	4664.725	135	34.55352	
Total	4845.304	137		

Here we accepted null it means student studying years involve stress level

5) Sum of SAAS score and residency ANOVA test

Anova: Single Factor

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
RESIDENCE (U=1,R=0)	138	45	0.326087	0.221358
Total	138	1608	11.65217	35.36719

ANOVA

Source of Variation	SS	df	MS	F
Between Groups	8851.337	1	8851.337	497.4262
Within Groups	4875.63	274	17.79427	
Total	13726.97	275		

P value is less than 0.05 so we accept the null

It means stress levels depend on the residence of a student

6) The rank correlation between family size and the sum of the SAAS score

$$R=1-(6\sum D^2 / N(N^2-1))$$

SIZE	Total	R _{SIZE}	R _{TOTAL}	D	D ²
3	13	3	81	-78	6084
5	17	83	107	-24	576
8	16	130	102	28	784
4	25	23	132	-109	11881
4	19	23	120	-97	9409
4	18	23	114	-91	8281
12	5	131	16	115	13225
4	19	23	118	-95	9025
5	10	79	54	25	625
5	14	79	86	-7	49

3	11	3	61	-58	3364
4	17	22	102	-80	6400
3	14	3	85	-82	6724
5	7	76	30	46	2116
4	8	21	35	-14	196
4	11	21	59	-38	1444
5	15	74	89	-15	225
4	11	21	59	-38	1444
4	12	21	66	-45	2025
4	17	21	95	-74	5476
6	14	102	80	22	484
3	20	3	108	-105	11025
6	19	101	105	-4	16
4	12	20	66	-46	2116
3	19	3	104	-101	10201
3	10	3	52	-49	2401
5	5	67	16	51	2601
5	11	67	57	10	100
4	14	18	76	-58	3364
3	8	3	34	-31	961
5	14	65	75	-10	100
5	17	65	87	-22	484
5	15	65	79	-14	196
4	11	17	56	-39	1521

5	17	64	85	-21	441
3	13	3	67	-64	4096
4	15	16	77	-61	3721
5	19	62	92	-30	900
9	7	97	29	68	4624
6	9	86	39	47	2209
4	12	16	59	-43	1849
5	16	61	76	-15	225
5	12	61	59	2	4
3	5	3	16	-13	169
3	9	3	38	-35	1225
5	14	59	67	-8	64
6	11	80	52	28	784
3	14	3	66	-63	3969
4	11	13	52	-39	1521
3	6	3	20	-17	289
12	12	88	54	34	1156
5	10	56	45	11	121
4	16	12	66	-54	2916
3	6	3	20	-17	289
4	5	11	16	-5	25
2	4	2	10	-8	64
3	7	2	24	-22	484
6	9	71	33	38	1444

5	3	51	7	44	1936
4	9	9	32	-23	529
4	10	9	38	-29	841
4	4	9	9	0	0
5	8	48	25	23	529
6	5	66	13	53	2809
4	5	9	13	-4	16
4	10	9	34	-25	625
5	8	46	23	23	529
4	4	9	9	0	0
5	8	45	22	23	529
4	8	9	22	-13	169
6	2	60	5	55	3025
6	6	60	12	48	2304
6	5	60	11	49	2401
4	8	9	19	-10	100
4	27	9	63	-54	2916
5	27	42	63	-21	441
4	6	9	11	-2	4
3	4	2	8	-6	36
4	2	8	5	3	9
4	9	8	17	-9	81
4	9	8	17	-9	81
5	10	37	21	16	256

4	16	8	39	-31	961
5	13	36	29	7	49
8	12	52	26	26	676
4	17	8	38	-30	900
3	15	2	35	-33	1089
4	18	7	40	-33	1089
5	24	33	48	-15	225
4	17	7	37	-30	900
4	22	7	43	-36	1296
5	23	31	44	-13	169
4	9	7	17	-10	100
3	18	2	38	-36	1296
4	13	6	27	-21	441
5	13	28	27	1	1
5	14	28	30	-2	4
4	11	6	22	-16	256
6	17	36	32	4	16
3	11	2	22	-20	400
3	13	2	25	-23	529
5	9	25	17	8	64
5	8	25	16	9	81
4	16	4	27	-23	529
4	11	4	20	-16	256
5	18	23	27	-4	16

5	9	23	16	7	49
4	22	4	28	-24	576
4	6	4	9	-5	25
4	6	4	9	-5	25
4	13	4	19	-15	225
3	12	2	17	-15	225
4	14	3	19	-16	256
4	15	3	19	-16	256
4	1	3	3	0	0
5	0	15	1	14	196
6	6	19	7	12	144
4	7	3	8	-5	25
4	17	3	15	-12	144
1	24	1	18	-17	289
4	18	2	15	-13	169
4	0	2	1	1	1
4	6	2	6	-4	16
5	10	9	9	0	0
5	10	9	9	0	0
4	7	2	6	-4	16
9	7	11	6	5	25
9	9	11	6	5	25
4	3	2	2	0	0
5	4	7	3	4	16

5	3	7	2	5	25
4	4	2	2	0	0
4	1	2	1	1	1
6	13	5	2	3	9
4	26	2	4	-2	4
4	23	2	3	-1	1
4	18	2	2	0	0
3	12	1	1	0	0

SUM	6*D^2	N(N^2-1)	R
191764	1150584	2627934	0.562172

so we conclude the income and the sum of the SAAS score are correlated

7)the rank correlation between sum of SAAS score and family income of the student

INCOME	Total	R(INM)	R(TOTAL)	D	D^2
12000	13	78	81	-3	9
80000	17	129	108	21	441
15000	16	86	103	-17	289
40000	25	119	135	-16	256
15000	19	86	123	-37	1369
150000	18	134	117	17	289
10000	5	58	16	42	1764
10000	19	58	123	-65	4225
30000	10	110	55	55	3025
5000	14	10	89	-79	6241
25000	11	108	63	45	2025
6000	17	27	108	-81	6561
6000	14	27	89	-62	3844

15000	7	86	31	55	3025
20000	8	99	37	62	3844
20000	11	99	63	36	1296
8000	15	44	98	-54	2916
30000	11	110	63	47	2209
5000	12	10	73	-63	3969
20000	17	99	108	-9	81
8000	14	44	89	-45	2025
10000	20	58	128	-70	4900
10000	19	58	123	-65	4225
9000	12	55	73	-18	324
10000	19	58	123	-65	4225
10000	10	58	55	3	9
100000	5	131	16	115	13225
16000	11	94	63	31	961
9000	14	55	89	-34	1156
35000	8	117	37	80	6400
8000	14	44	89	-45	2025
16000	17	94	108	-14	196
8000	15	44	98	-54	2916
10000	11	58	63	-5	25
12000	17	78	108	-30	900
10000	13	58	81	-23	529
19000	15	98	98	0	0
15000	19	86	123	-37	1369
18000	7	96	31	65	4225
200000	9	135	45	90	8100
12000	12	78	73	5	25
5000	16	10	103	-93	8649
30000	12	110	73	37	1369
4800	5	9	16	-7	49
7000	9	37	45	-8	64
30000	14	110	89	21	441
8000	11	44	63	-19	361
6000	14	27	89	-62	3844
35000	11	117	63	54	2916
5000	6	10	23	-13	169
15000	12	86	73	13	169
6000	10	27	55	-28	784
20000	16	99	103	-4	16
500	6	2	23	-21	441
7000	5	37	16	21	441
5000	4	10	10	0	0

40000	7	119	31	88	7744
5000	9	10	45	-35	1225
4000	3	4	7	-3	9
12000	9	78	45	33	1089
4000	10	4	55	-51	2601
4000	4	4	10	-6	36
10000	8	58	37	21	441
12000	5	78	16	62	3844
15000	5	86	16	70	4900
20000	10	99	55	44	1936
18000	8	96	37	59	3481
20000	4	99	10	89	7921
30000	8	110	37	73	5329
30000	8	110	37	73	5329
15000	2	86	5	81	6561
10000	6	58	23	35	1225
60000	5	126	16	110	12100
10000	8	58	37	21	441
9000	27	55	137	-82	6724
5000	27	10	137	-127	16129
5000	6	10	23	-13	169
50000	4	124	10	114	12996
10000	2	58	5	53	2809
5000	9	10	45	-35	1225
5000	9	10	45	-35	1225
10000	10	58	55	3	9
4000	16	4	103	-99	9801
48000	13	123	81	42	1764
14800	12	85	73	12	144
6000	17	27	108	-81	6561
5000	15	10	98	-88	7744
5000	18	10	117	-107	11449
5000	24	10	133	-123	15129
0	17	1	108	-107	11449
5000	22	10	129	-119	14161
6000	23	27	131	-104	10816
7000	9	37	45	-8	64
50000	18	124	117	7	49
8000	13	44	81	-37	1369
8000	13	44	81	-37	1369
7000	14	37	89	-52	2704
8000	11	44	63	-19	361
8000	17	44	108	-64	4096

8000	11	44	63	-19	361
7000	13	37	81	-44	1936
7000	9	37	45	-8	64
6000	8	27	37	-10	100
14000	16	84	103	-19	361
28000	11	109	63	46	2116
5000	18	10	117	-107	11449
1000000	9	138	45	93	8649
600000	22	136	129	7	49
600000	6	136	23	113	12769
12000	6	78	23	55	3025
40000	13	119	81	38	1444
10000	12	58	73	-15	225
10000	14	58	89	-31	961
22000	15	107	98	9	81
100000	1	131	3	128	16384
15000	0	86	1	85	7225
100000	6	131	23	108	11664
10000	7	58	31	27	729
65000	17	127	108	19	361
40000	24	119	133	-14	196
80000	18	129	117	12	144
20000	0	99	1	98	9604
30000	6	110	23	87	7569
10000	10	58	55	3	9
20000	10	99	55	44	1936
8000	7	44	31	13	169
6000	7	27	31	-4	16
6000	9	27	45	-18	324
6000	3	27	7	20	400
5000	4	10	10	0	0
65000	3	127	7	120	14400
3000	4	3	10	-7	49
4000	1	4	3	1	1
7000	13	37	81	-44	1936
10000	26	58	136	-78	6084
10000	23	58	131	-73	5329
10000	18	58	117	-59	3481
5000	12	10	73	-63	3969
				TOTAL	467248

$6\Sigma D^2$	2803488
$N(N^2-1)$	2627934

$$R = 1 - (6\Sigma D^2 / N(N^2 - 1))$$

$$R = -0.0668030475$$

We conclude that the sum of the SAAS score and the family size of a student is a negatively correlated

Conclusion: In this era, students are highly pressurized by study and various types of exams where students are put in highly competitive exams with life-changing decisions and circumstances. Academic stress is correlated with family size and also family income, the residence of a student.

References:

- Baldwin, D.A.(2000) Interpersonal understanding fuels knowledge acquisition current direction psychological science
 - E.V.Clark Meaning and concept(1983)
 - J.H.Flavell, E.M.Markman Handbook of child psychology
 - Hooda, D.Sharma, N.R & A.Yadava Social Intelligence as predictor of positive psychology health, Journal of the Indian Academic of Applied psychology
 - J.W.Best and Kahn,J.V.(1996) "Research in Education" Prentice Hall of India, New Delhi
 - Bhargava.R(2006) Behaviour psychology,ABD Publisher,Jaipur,India
 - R.S.Carter & R.A.Wojtkiewicz(2000) Parental involment with adolescent 35(137),29-44
-