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A Comparative Study of Work Related Stress among Government and Private College Faculty in Uttarakhand State, India

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Abstract:

Today's human life is full of stress & challenges. The job of a teacher is physically & mentally challenging. A faculty uses lot of energy in class room teaching, in addition to his or her personal and family commitments. This works as a source of stress to the teachers.

In Today's scenario, work is not a source of satisfaction and fulfillment; rather it is becoming a source of stress, discontentment and humiliation as there is a deterioration of mental peace and aggravation of stress level in the Private sector due to unsatisfactory job conditions.

Several studies have been done to study the work related stress in sectors- Banking, corporate, medical etc but the teaching sector is still neglected in India.

The present paper aims to locate the differences in the stress level of government and private college faculty and stress symptoms experienced by them.

Keywords: Job stress, Government College, Private College, stress related symptoms, t-test analysis.

1. Introduction

During the last few decades, there has been mushroom growth of private colleges in Uttarakhand. Two reasons to support are:

- (1) People are unsatisfied and unhappy with the quality of education imparted by government colleges.
- (2) Less number of seats available with government colleges. Hence, private colleges have become compelling reality not only in Uttarakhand but in the whole nation.

Obviously, faculty turnover in private colleges is much higher than in government colleges. In present times, the private college's faculty is working under very demanding circumstances which kill their motivation and add to their anxiety and tension.

Studies related studies in the field of academics began in early 1970's, focusing on identifying the sources of stress. In this era, the problem of stress among faculty has been recognized by developed countries also. In fact, it is a serious problem in developing countries specially India, where teachers and faculty are part of deprived community.

A state like Uttarakhand having about 63% of forests and only 37% non-forested areas, with a tough hilly life for majority of population, the level of stress in academics is a serious issue.

Today, faculty and teachers have to face challenges regarding low social status, stressful working conditions, inadequate facilities, less financial resources etc. This community is facing pressures at personal and work fronts. The teachers and faculty under stress are unable to fulfill their responsibilities as per their expectations, which force us to conduct a research on stress among faculty.

2. Objectives

1. To compare the work related stress among government and private college faculty in Uttarakhand.
2. To check if private college faculty is having more work related stress than government college faculty.
3. To observe the symptoms as a consequence of work related stress experienced by government and private college faculty.

3. Materials and Methods

3.1 Study design: Cross sectional study.

3.2 Study area: Two private colleges and two government colleges of Uttarakhand state.

3.3 Study Period: January- March 2016.

3.4 Methodology: Two Private colleges and two government colleges of Uttarakhand state were selected randomly.

All faculty members of four colleges were included in the study. In all they constituted 380 faculty members, out of this 180 are Government College faculty and 200 are faculty from Private colleges.

4. Tools of Study

The study was conducted on the basis of data collected with the help of questionnaire. The questionnaire was divided in three parts. First part of questionnaire has demographic questions and the second part of questionnaire is further divided into three categories: (1) Personality Characteristics (2) Interpersonal relations (3) System factors. Each of these categories consisted of five questions. For each question stress is assessed as present or absent. The questionnaire is made on nominal scale.

4.1. Personality Characteristics

- 1) Loss of control
- 2) Fear of failure
- 3) Exhaustion
- 4) Friendliness
- 5) Anger.

4.2. Interpersonal Relations

- 1) Role in decision making
- 2) Class room presence mandatory
- 3) Humiliation in front of others
- 4) Flexibility in access to management
- 5) Competitiveness.

4.3. System Factors

- 1) Entire responsibility for student's academic process
- 2) Leave sanctioned when needed
- 3) Scope of development
- 4) Clear job description
- 5) Well ventilated classroom and staff room.

Out of five questions in category, if stress is present in four to five items it is considered as severe stress, if stress is present in three items it is considered as moderate stress, if stress is present in one to two items it is considered as mild stress and no item shows stress it is considered as no stress.

4.4. The Third and the Last Part of Questionnaire Assessed Stress Related Symptoms

- 1) Headache
- 2) Helplessness
- 3) Anxiousness
- 4) Poor sleep patterns
- 5) Ulcers
- 6) Irritation
- 7) Overexertion
- 8) Inability to concentrate
- 9) Less confidence
- 10) Sugar
- 11) Blood pressure
- 12) Depression

5. Procedure for Data Collection

After random selection of schools, the schools were approached personally to get permission from respective Director's and Dean's and informed consent was taken from respondent faculty individually. The respondent faculty was approached and after a short introduction, the questionnaires were distributed.

6. Analysis

Comparison table, tests and pie diagrams were used for the purpose of analysis of data. Student's t-test was applied to test the significance. Age, gender, teaching experience in years, marital status, type of employment and income were taken as demographic questions and independent variable.

Comparison was done between the stress level of government and private college faculty.

Variable	Government College (n=180)	Private College (n=200)
Age:		
25 - 35 years	18 (10%)	33(16.5%)
35 - 45 years	49 (27.2%)	79 (39.5%)
45 – 55 years	85 (47.3%)	66 (33%)
55 – 65 years	28 (15.5%)	22 (11%)
Gender:		
Male	109 (60.5%)	112 (56%)
Female	71 (39.5%)	88 (44%)
No. of years of Experience:		
< 10 yrs	9 (5%)	113 (56.5%)
10 to 20 yrs	49 (27.3%)	65 (32.5%)
> 20 yrs	122(67.7%)	22 (11%)
Marital Status:		
Married	129 (71.67%)	92 (46%)
Unmarried/divorced/widow	51 (28.3%)	108 (54%)
Type of employment:		
Permanent	173 (96.2%)	0 (0%)
Temporary	7 (3.8%)	200 (100%)
Income:		
<20,000 per month	0 (0%)	15 (7.5%)
20,000 to 40,000 per month	0 (0%)	157 (78.5%)
> 40,000 per month	180 (100%)	28 (14%)

Table 1: Socio Demographic details of respondents from government and private colleges

S. No	Type of College	Severe Stress (percentage)	Moderate Stress (percentage)	Mild Stress (percentage)	No Stress (percentage)	Total (percentage)
1	Government College	32 (17.8%)	77 (42.8%)	41(22.7%)	30 (16.7%)	180 (100)
2	Private College	73 (36.5%)	118(59%)	9 (4.5%)	0 (0%)	200 (100)

Table 2: Comparison of Personality factors among government and private college faculty.

Calculations for table 2:

Null Hypothesis: There is a significant difference between the stress (Personality factors) levels in Government and Private colleges.

Alternative Hypothesis: There is no significant difference between the stress levels in Government and Private colleges.

$$1. \text{ Standard deviation (S.D.)} = \sqrt{\frac{\Sigma (X_1 - \bar{X}_1)^2 + \Sigma (X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}}$$

$$2. \text{ Standard error of } (\bar{X}_1 - \bar{X}_2) \text{ (S.E)} = \text{S.D} \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$$

$$3. \text{ Degrees of freedom (df)} = n_1 + n_2 - 2$$

4. Table of values: -

Govt college (X ₁)	X ₁ - \bar{X}_1	(X ₁ - \bar{X}_1) ²	Private college (X ₂)	X ₂ - \bar{X}_2	(X ₂ - \bar{X}_2) ²
32	-13	169	73	23	529
77	32	1024	118	68	4624
41	-4	16	9	-41	1681
30	-15	225	0	-50	2500
		$\Sigma (X_1 - \bar{X}_1)^2 = 1434$			$\Sigma (X_2 - \bar{X}_2)^2 = 9334$

$$\bar{X}_1 = 45$$

$$\bar{X}_2 = 50$$

$$\text{Standard deviation} = \sqrt{\frac{1434+9334}{6}} = \sqrt{1794.67} = 42.36$$

$$\text{Standard error} = 42.36 \times \sqrt{\frac{1}{4} + \frac{1}{4}} = 42.36 \times \sqrt{\frac{1}{2}} = 29.96$$

T- statistic:

$$t = \frac{|\bar{X}_1 - \bar{X}_2|}{S.E} = \frac{5}{29.96} = 0.4085$$

Degrees of freedom = 6

Calculated value of t = 0.4085

Tabulated value of t at 5% level of significance for 6 degrees of freedom is 2.45

Conclusion: We observe that the calculated value of t is less as compared to the tabulated value of t at 5% level of significance and for 6 degrees of freedom. Hence we conclude that there is a significant difference between the stress levels between the Government and Private colleges.

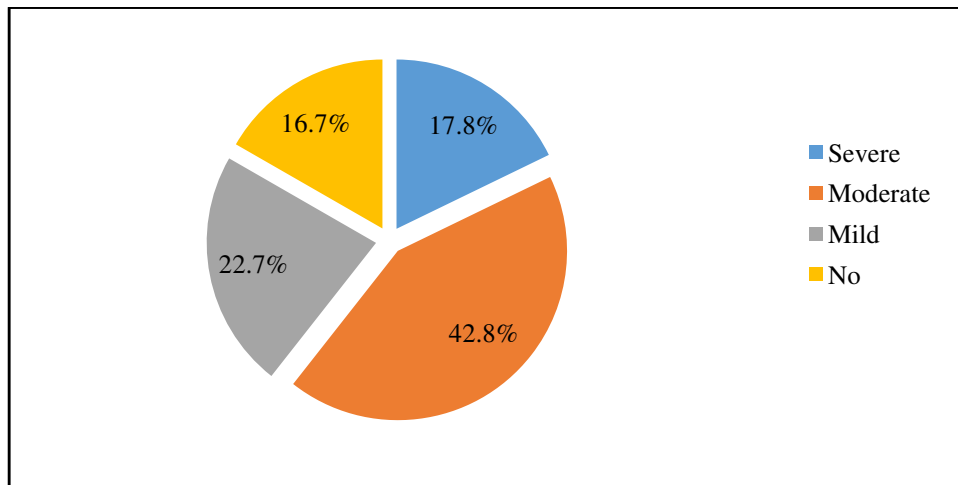


Figure 1: Pie Chart to show the personality related stress among government college faculty

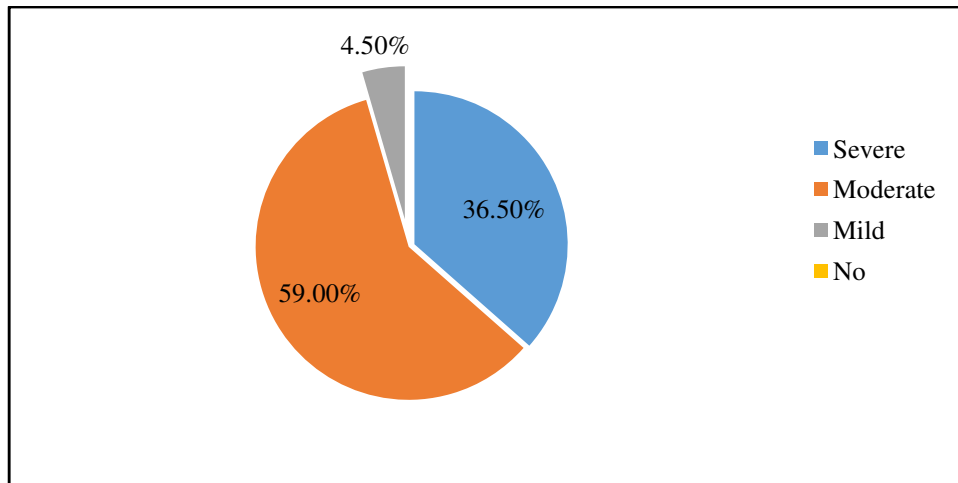


Figure 2: Pie Chart to show the personality related stress among private college faculty

S. No	Type of College	Severe Stress (percentage)	Moderate Stress (percentage)	Mild Stress (percentage)	No Stress (percentage)	Total (percentage)
1	Government College	61 (33.9%)	89(49.4%)	12 (6.7%)	18 (10%)	180 (100)
2	Private College	94 (47%)	91 (45.5%)	15 (7.5%)	0 (0%)	200 (100)

Table 3: Comparison of Interpersonal factors among government and private college faculty.

Calculations for table 3:

Null Hypothesis: There is a significant difference between the stress (Interpersonal factors) levels in Government and Private colleges.

Alternative Hypothesis: There is no significant difference between the stress levels in Government and Private colleges.

$$1. \text{ Standard deviation (S.D.)} = \sqrt{\frac{\Sigma(X_1 - \bar{X}_1)^2 + \Sigma(X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}}$$

$$2. \text{ Standard error of } (\bar{X}_1 - \bar{X}_2) \text{ (S.E)} = \text{S.D} \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$$

$$3. \text{ Degrees of freedom (df)} = n_1 + n_2 - 2$$

4. Table of values: -

Govt college (X ₁)	X ₁ - X̄ ₁	(X ₁ - X̄ ₁) ²	Private college (X ₂)	X ₂ - X̄ ₂	(X ₂ - X̄ ₂) ²
61	16	256	94	44	1936
89	44	1936	91	41	1681
12	-33	1089	15	-35	1225
18	-27	729	0	-50	2500
		Σ (X ₁ - X̄ ₁) ² = 4010			Σ (X ₂ - X̄ ₂) ² = 7342

$$\bar{X}_1 = 45$$

$$\bar{X}_2 = 50$$

$$\text{Standard deviation} = \sqrt{\frac{4010 + 7342}{6}} = \sqrt{1892} = 43.497$$

$$\text{Standard error} = 43.497 \times \sqrt{\frac{1}{4} + \frac{1}{4}} = 43.497 \times \sqrt{\frac{1}{2}} = 30.756$$

T- statistic:

$$t = \frac{|\bar{X}_1 - \bar{X}_2|}{S.E} = \frac{5}{30.756} = 0.1626$$

Degrees of freedom = 6

Calculated value of t = 0.1626

Tabulated value of t at 5% level of significance for 6 degrees of freedom is 2.45

Conclusion: We observe that the calculated value of t is less as compared to the tabulated value of t at 5% level of significance and for 6 degrees of freedom. Hence we conclude that there is a significant difference between the stress levels between the Government and Private colleges.

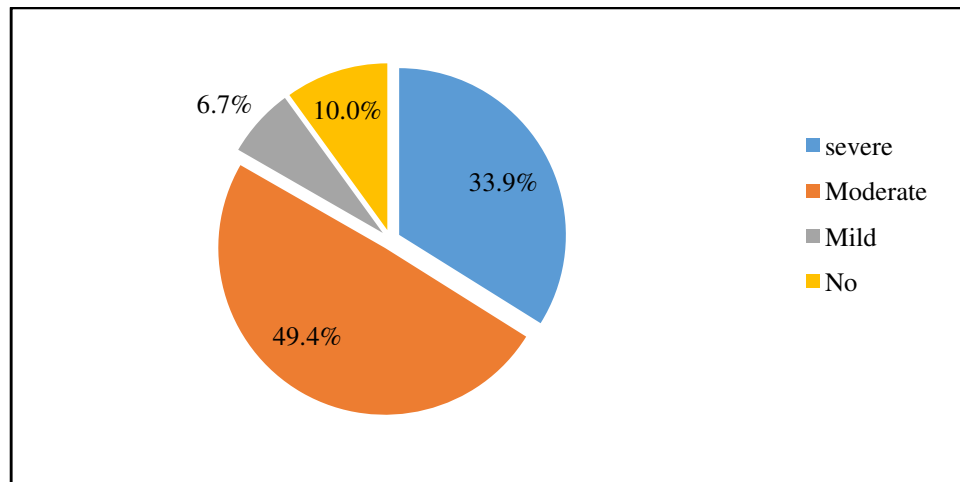


Figure 3: Pie Chart to show the Interpersonal factor stress among government college faculty

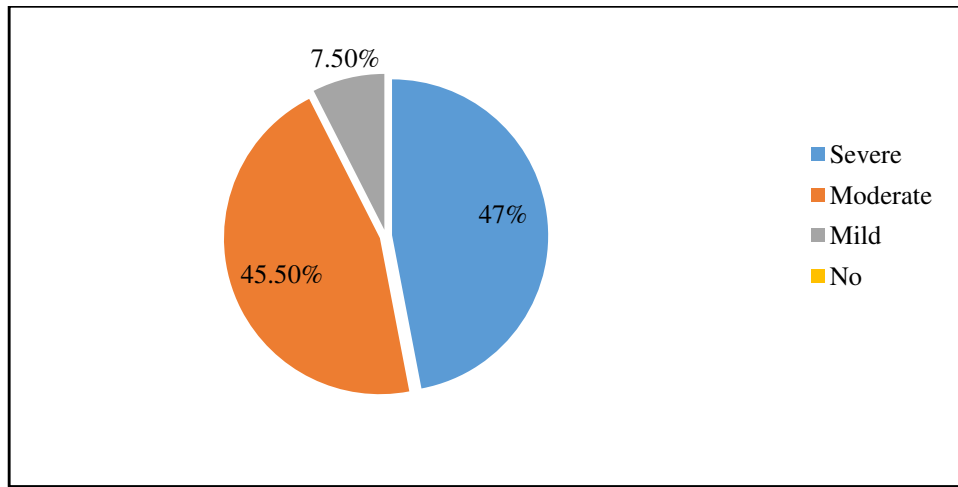


Figure 4: Pie Chart to show the personality related stress among private college faculty.

S. No	Type of College	Severe Stress (percentage)	Moderate Stress (percentage)	Mild Stress (percentage)	No Stress (percentage)	Total (percentage)
1	Government College	42 (23.33%)	61 (33.89%)	34 (18.89%)	43 (23.89%)	180 (100)
2	Private College	98 (49%)	99 (49.5%)	3 (1.5%)	0 (0%)	200 (100)

Table 4: Comparison of System factors among government and private college faculty.

Calculations for table 4:

Null Hypothesis: There is a significant difference between the stress (System factors) levels in Government and Private colleges.

Alternative Hypothesis: There is no significant difference between the stress levels in Government and Private colleges.

$$1. \text{ Standard deviation (S.D.)} = \sqrt{\frac{\Sigma (X_1 - \bar{X}_1)^2 + \Sigma (X_2 - \bar{X}_2)^2}{n_1 + n_2 - 2}}$$

$$2. \text{ Standard error of } (\bar{X}_1 - \bar{X}_2) \text{ (S.E)} = \text{S.D} \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$$

$$3. \text{ Degrees of freedom (df)} = n_1 + n_2 - 2$$

4. Table of values: -

Govt college (X ₁)	X ₁ - \bar{X}_1	(X ₁ - \bar{X}_1) ²	Private college (X ₂)	X ₂ - \bar{X}_2	(X ₂ - \bar{X}_2) ²
42	-3	9	98	48	2304
61	-16	256	99	49	2401
34	-11	121	3	-47	2209
43	-2	4	0	-50	2500
		$\Sigma (X_1 - \bar{X}_1)^2 = 390$			$\Sigma (X_2 - \bar{X}_2)^2 = 9414$

$$\bar{X}_1 = 45$$

$$\bar{X}_2 = 50$$

$$\text{Standard deviation} = \sqrt{\frac{390 + 9414}{6}} = \sqrt{1634} = 40.423$$

$$\text{Standard error} = 40.423 \times \sqrt{\frac{1}{4} + \frac{1}{4}} = 40.423 \times \sqrt{\frac{1}{2}} = 28.583$$

T- statistic:

$$t = \frac{|\bar{X}_1 - \bar{X}_2|}{S.E} = \frac{5}{71.137} = 0.4182$$

Degrees of freedom = 6

Calculated value of t = 0.4182

Tabulated value of t at 5% level of significance for 6 degrees of freedom is 2.45

Conclusion: We observe that the calculated value of t is less as compared to the tabulated value of t at 5% level of significance and for 6 degrees of freedom. Hence we conclude that there is a significant difference between the stress levels between the Government and Private colleges.

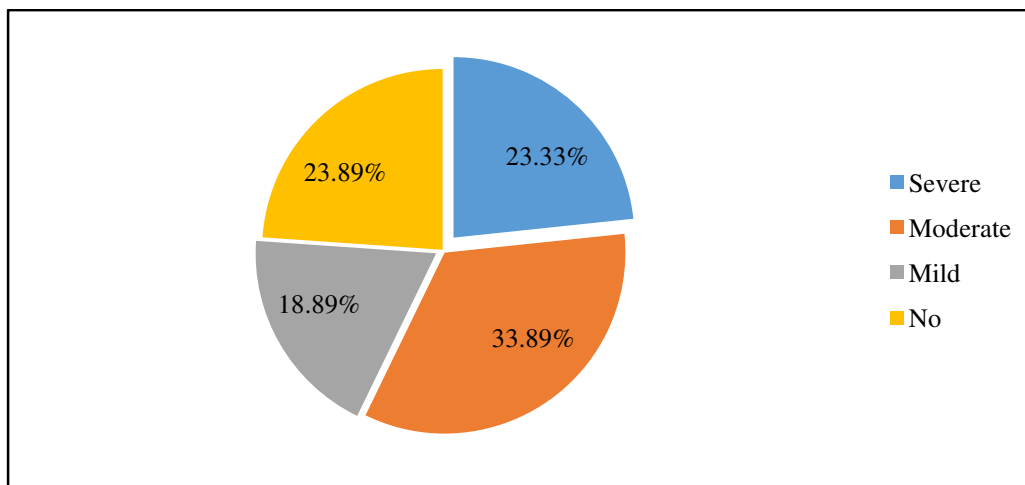


Figure 5: Pie Chart to show the system factor stress among government college faculty

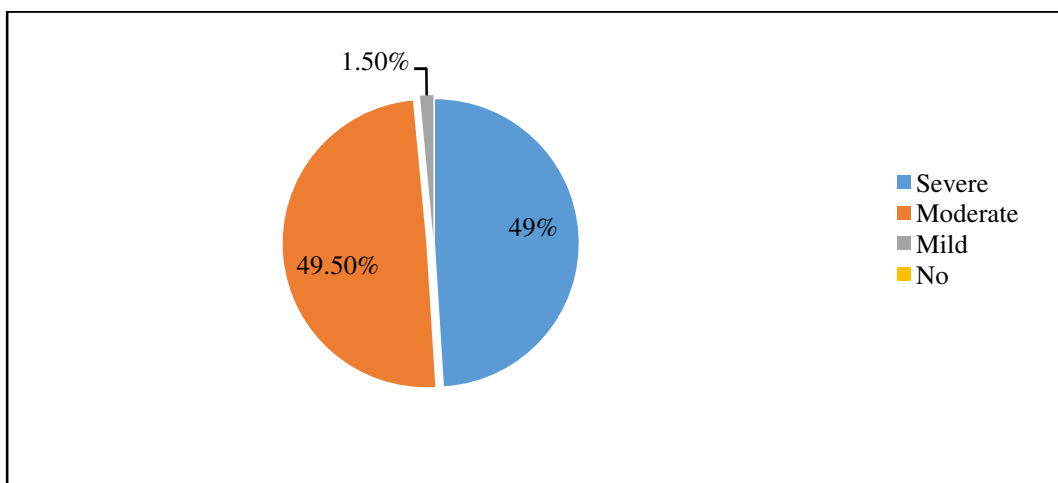


Figure 6: Pie Chart to show the personality related stress among private college faculty

Symptoms	Government College (n=200)	Private College (n=200)
Headache	34 (17%)	70 (35%)
Helplessness	21 (10.5%)	42 (21%)
Anxiousness	52 (26%)	84 (42%)
Poor sleep patterns	17 (8.5%)	53 (26.5%)
Ulcers	9 (4.5%)	18 (9%)
Irritation	31 (15.5%)	66 (33%)
Overexertion	8 (4%)	71 (35.5%)
Inability to concentrate	9 (4.5%)	46 (23%)
Lack of confidence	18 (9%)	21(10.5%)
Sugar	31(15.5%)	92 (46%)
Blood pressure	24 (12%)	102 (51%)
Depression	19 (9.5%)	65 (32.5%)

Table 5: Distribution of symptoms due to work related stress experienced by the government and private college faculty.

7. Interpretation and Results

7.1. Table 1

(1) In Government colleges maximum number (47.3%) of faculty lies in age group of 45-55 years followed by 27.2% in the age group of 35-45 years and minimum number (10%) of faculty comes in the age group of 25-35 years. We can interpret that maximum faculty members are in the age group of 35-55 years. Whereas, in private colleges maximum is youth (39.5%) lying between the age group of 35-45 years followed by 33% in the age group of 45-55 years. We can say that there is more no. of matured and experienced faculty in government colleges as compared to private colleges.

(2) As per the gender classification, in government colleges, most (60.5%) of the faculty are males, whereas in private colleges the same is the result i.e., 56% are male faculty. So, here we can conclude that in both types of colleges most of the faculty is male.

(3) Regarding the teaching experience of faculty members it was found that maximum number of government college faculty (67.7%) holds an experience of more than 20 years which shows that there is a high degree of job stability in government colleges whereas, the maximum number (56.5%) of private college faculty holds an experience of less than 10 years which is an indicator of less job stability in private colleges. People keep on changing their jobs and few moves to the corporate world leaving the teaching profession.

(4) The next question in the demographic detail was regarding marital status of college faculty. In government colleges majority of faculty (71.67%) is married and only 28.3% belongs to Unmarried/divorced/widow group, whereas in private colleges majority (54%) belongs to unmarried group and 46% faculty are married, showing almost equal distribution of the two.

(5) Another question in demographic details was to find out the nature and type of employment. It is seen that 96.2% government college faculty is appointed on permanent basis as against only 3.8% on temporary basis. This lot of temporary faculty is on contractual basis, employed for 11 months in a year. These people are working out of the apprehension of becoming permanent in near future. On the contrary, private college faculty on papers holds permanent employment but in reality nobody is permanent. Management can terminate anyone with zero-day notice, without giving a thought to their source of income and their families.

(6) Regarding the incomes of both types of colleges, all the government college faculty members are getting a salary of more than Rs 40,000 per month. There is no one getting less than Rs.40000 per month. Government keeps on implementing the latest pay commission. Nobody can deny the fact that the fee structures in government universities and colleges is much less than the fee structure prevalent in private universities. Whereas, the Private colleges run on the principle of profit maximization and do not intend to increase the cost by paying higher salaries. The maximum number (78.5%) of private college faculty gets a salary between Rs 20,000 to Rs 40,000 per month. Only Heads of the Department/ Deans/ Director are getting a salary of more than Rs 40,000 per month. This is a real example that the highly educated ones are becoming minimum paid ones. The most respectable and prestigious professionals of olden times are now coming in the category of lower middle class. Government is motivating and liberalizing the private education system but failing to keep a check on their working is also an important issue to be taken care off. To cover themselves most of the private colleges, follow the respective pay commissions with regard to basic salary but put a knife on other heads as D.A, HRA etc.the condition is different in all cases but the objective to pay less is the same.

7.2. Table 2

It studies the personality factors of college faculty. We took five stress features under personality characteristics like loss of control, fear of failure, exhaustion, friendliness and anger. It is observed that in government colleges the maximum faculty (42.8%) is into moderate stress followed by 16.7% with no stress and 22.7% with mild stress. Whereas, the severe stress is only 17.8% among government college faculty. Whereas, on the same parameter, results in private colleges were different like majority (59%) is in the moderate stress followed by 36.5% bearing a severe stress and only 4.5% are bearing mild stress. To our surprise there was no single faculty with 0% stress in private colleges. It is observed that 96% private college faculty is under stress against 0% under no stress with respect to personality factors. Comparing this with government colleges, due to faculty friendly policies, there are 16.7% respondents with zero stress level. (Please see Figure 1 and Figure 2)

To have better comparison of stress level, we applied t-test and it was observed that the calculated value of t is less than the table value, hence we accepted the null hypothesis and concluded that there is a significant difference between the stress levels between the Government and Private colleges. (Please see the calculations of table 2)

7.3. Table 3

This table shows the statistical presentation of data regarding interpersonal factors. The five stress features are included in Interpersonal characteristics as, Role in decision making, class-room presence, humiliation in front of others, flexibility in access to management and competitiveness. Results show that the majority (49.4%) of Government college faculty face moderate stress, followed by just 33.9% face severe stress, 10% facing no stress and 6.7% mild stress. Whereas, majority (47%) of private college faculty is facing severe stress, followed by 45.5% facing moderate stress and 7.5% mild stress. Again there is no single faculty with zero stress. It is observed that around 93% private college faculty are working under stress as against 0% are working under no stress with respect to interpersonal factors. (Please see Figure 3 and Figure 4)

To have better comparison of stress level, we applied t-test and it was observed that the calculated value of t is less than the table value, hence we accepted the null hypothesis and concluded that there is a significant difference between the stress levels between the Government and Private colleges. (Please see the calculations of table 3)

7.4. Table 4

This table is a statistical data presentation of system factors among government and private college faculty. The five factors included in system are, responsibility for students, leave sanctioning, development scope, job description and ventilation of class-room and staff-room.

The government college data shows that majority (33.89%) faculty is working under moderate stress, followed by 23.89% under no stress. Severe stress is only to 23.33% among government college faculty. As against this, in private colleges almost 50% faculty is working under severe stress and rest 50% is working in moderate stress. Again it is observed that no faculty is working without stress. (Please see Figure 5 and Figure 6)

To have better comparison of stress level, we applied t-test and it was observed that the calculated value of t is less than the table value, hence we accepted the null hypothesis and concluded that there is a significant difference between the work-related stress level among faculty of Government and Private Colleges. (Please see the calculations of table 4)

7.5. Table 5

This table studies the data related to symptoms of work related stress experienced by government and private college faculty. More than one symptom is seen in many respondents. The maximum respondents (26%) showed symptoms of anxiousness followed by 17% suffering from headache. Sugar is reported by 15.5% and irritation is also reported by 15.5%. 12% faculty is facing the problem of high or low blood pressure, 10.5% faculty feels that they are helpless. This is a group which is comparatively less strong and lacks communication skills. Due to stress they adopt a withdrawal attitude and start feeling helpless. 9.5% faculty is fighting with depression situation. 9% respondents face symptom of low confidence and 8.5% are observing poor sleep patterns. Few respondents reported ulcers, inability to concentrate and overexertion. As against this, private college data are very different. On an average single faculty reported three symptoms. Going into detail, 51% private college faculty is suffering from blood pressure, followed by 46% with diabetes. High sugar itself opens up the way to other health issues. 42% faculty reported anxiousness, 35.5% are overexerted and 35% headache. 33% respondents become irritable which affected their working as well as their creativity. 32.5% of private college faculty suffered from depression which is adversely affecting their family life, followed by 26.5% faculty were observed to have poor sleep patterns. 23% were unable to concentrate in their work followed by 21% reported helplessness. Few reported ulcers and lack of confidence.

8. Suggestions

1. There is much to be taken care of by private college management.
2. There is no harm in privatization of higher education but Government should keep a strict watch on the working of private sector.
3. Education should not be seen only as a medium of profit making.
4. Government should have strict control on the pay structure followed by private sector.
5. There should be a security of job.
6. Unity of command should be followed.
7. There should be a faculty friendly work environment.
8. Work load of teaching staff should be fixed as per their designation.
9. There should be a faculty grievances cell, to solve their problems without taking them to owners group.
10. Timely increments to be followed.
11. Proper research motivation is necessary.
12. Development programmes to be conducted.
13. Experienced faculty should be recognized.
14. Policies for female working group to be strictly observed, as maternity leaves and benefits etc.
15. Medical leaves, academic leaves to be given.
16. Repetition of work should be avoided.
17. Government should increase the number of seats availability so as to employ more faculty.
18. Government can sponsor good faculty of private colleges for further projects.

9. Conclusion

For the development and growth of the country it is necessary to privatize all sectors but at the same time it becomes the duty of government to make sure that the working of private sector should be at par with government sector. We are into the mixed economy where government has the complete right to keep a check on private sector. The private college faculty should be treated with respect and should be given facilities at par with government college faculty. Everybody should understand that to get the maximum benefit from personnel it is important to take care of their mental peace and stress has to be minimized. Working without stress can give best results. Instead of assuming faculty as cost, the private college management should take them as assets.

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