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PREDICTING TEACHER BURNOUT: CONTRIBUTION OF EMOTIONAL EXHAUSTION, DEPERSONALIZATION AND REDUCED PERSONAL ACCOMPLISHMENT TO THE PERCENTAGE VARIANCE OF BURNOUT

Abhilash Babu P.[1] and Dr. N. Balasubramanian[2]
[1]Lecturer in IFIC (In service training, Field Interaction, Innovation and Co-ordination), DIET, Sulthan Bathery, Wayanad, Kerala.
[2]Former Professor and Head, Department of Education, Bharathiar University, Coimbatore, Tamil Nadu.

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ABSTRACT

This research paper is an attempt to find out the best predictor of Burnout of teachers. Teachers in the performance of their professional roles and responsibilities often encounter a range of interpersonal and task demands, some of which tend to be quite stressful for them. They respond to situations in which they find that either outcomes are uncertain or these give rise to negative emotional states and outcomes, by making a variety of attributional, behavioural, physiological and psychological responses. The cumulative effect of these responses becomes apparent in adverse effects on the teacher commitment to remain in the classroom and the teaching profession. Eventually, the level of stress experienced may reach a level high enough to be labelled burnout. Burnout has an impact on not only the teacher, institution and the students but also the family of the teacher. In this study data was collected from 300 teachers using Burnout Inventory for Teachers. Finally the data was analysed by statistical method - multiple regression analysis (ANOVA) technique. The finding of the study reveals that the best predictor of burnout of teachers is emotional exhaustion.

KEYWORDS: *Burnout, Depersonalization, Emotional Exhaustion, Reduced Personal Accomplishment.*

INTRODUCTION :

Burnout is a state of physical, mental, and emotional exhaustion resulting from chronic stress. It is characterized by feelings of alienation, indifference, and low self-regard, a loss of interest in work, and an inability to perform one's day-to-day job duties. Burnout within the teaching profession has been recognized as a serious problem. Studies indicate that teacher burnout has a negative effect on student motivation and learning. Burnout consists of three components: emotional exhaustion, depersonalization, and reduced personal accomplishment. These components may be described as follows:

- *Emotional exhaustion* is a chronic state of physical and emotional depletion. Persons suffering from it feel drained, fatigued, and no longer able to cope with the demands of their jobs.
- *Depersonalization* involves the development of callous, cynical attitudes about one's career and work. Persons experiencing such attitudes feel that nothing they do has any meaning or value – and that others feel this way, too.
- *Reduced personal accomplishment* refers to a tendency to evaluate oneself negatively regarding your accomplishments at work. People experiencing this reaction feel they have not accomplished much in the past – and that they will not succeed in the future, either.

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OBJECTIVE OF THE STUDY
- To identify the *best predictor* of Burnout of teachers from a set of predictor variables.

HYPOTHESIS OF THE STUDY
- *Best predictor* of Burnout of teachers will be identified from a set of predictor variables

SAMPLE
The study is carried out on a representative sample of 300 teachers from the primary, secondary and higher secondary schools of Kerala state. *Proportionate stratified sampling technique* was employed. In selecting the sample, due representation is given to the category of teachers, gender (male and female), school locale (rural and urban) , type of management of schools (government and private aided) and also to the biographical aspects (age, educational qualification, teaching experience, marital status, type of career of couples and number of dependents) of teachers. The sample is drawn from the three districts of Kerala, *viz*., Kannur, Kozhikode and Malappuram taking 100 each from primary, secondary and higher secondary schools.

TABLE 1: Break-up of the Sample

Locale	Category of School	Type of Management	Gender of Teacher		Total	Grand Total	Grand Grand Total
			Male	Female			
Urban	Primary	Govt.	8	8	16	40	120
		Private	12	12	24		
	Secondary	Govt.	8	8	16	40	
		Private	12	12	24		
	Higher secondary	Govt.	8	8	16	40	
		Private	12	12	24		
Rural	Primary	Govt.	12	12	24	60	180
		Private	18	18	36		
	Secondary	Govt.	12	12	24	60	
		Private	18	18	36		
	Higher secondary	Govt.	12	12	24	60	
		Private	18	18	36		
Total							300

TOOL
Burnout Inventory for Teachers (Balasubramanian and Babu, 2008)
Burnout Inventory for Teachers (BIT) developed by Balasubramanian and Babu(2008) was used to quantify the burnout of teachers of various categories. BIT contains twenty five items and these comes under three major dimensions namely emotional exhaustion, depersonalization and reduced personal accomplishment constructed in the Likert format. Sum of the responses for all twenty five items, give an indication of one's burnout.

LIMITATIONS OF THE STUDY
1. Even though the sample selected for the present study is on a proportionate stratified sampling basis, it represents a few percent of the total population of teachers of Kerala. Time cost factor forced the investigator to limit the sample size to 300**.**
2. The sample of the study is not a state-wide one, but confined to three districts in Kerala *viz*., Kannur, Kozhikode, Malappuram

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ANALYSIS AND INTERPRETATION
Identification of Best Predictor of Burnout

To identify the best predictor of burnout, its three dimensions *viz*., emotional exhaustion, depersonalization and reduced personal accomplishment were treated as independent variables (predictor variables) and the burnout – total as dependent variable (criterion variable). The Multiple Regression Analysis – Step wise has been done for the total sample. The basic statistics like the mean and standard deviation of the criterion variable, burnout and of the predictor variables *viz*., emotional exhaustion, depersonalization and reduced personal accomplishment are given in Table 2.

Table 2: Input data for Step -wise Regression Analysis Related to Burnout

Sl. No.	Variables	Mean (N = 300)	Standard Deviation (N = 300)
	Criterion Variable		
1	Burnout - Total	96.81	28.97
	Predictor Variables		
2	Emotional Exhaustion	35.74	12.87
3	Depersonalization	34.31	10.40
4	Reduced Personal Accomplishment	26.76	7.42

The correlation matrix of the criterion variable burnout (total) with the three predictor variables *viz*., emotional exhaustion, depersonalization and reduced personal accomplishment is presented in Table 3.

Table 3: Correlation Matrix of the Criterion (Burnout) and Predictor Variables

Sl.	Variables	Burnout - Total (Y)	Emotional Exhaustion (X_1)	Depersonalization (X_2)	Reduced Personal Accomplishment (X_3)
	Criterion Variable				
1	Burnout - Total (Y)	1.000			
	Predictor Variables				
2	Emotional Exhaustion (X_1)	0.904**	1.000		
3	Depersonalization (X_2)	0.794**	0.755**	1.000	
4	Reduced Personal Accomplishment (X_3)	0.972**	0.954**	0.880**	1.000

Note: Only one side of the matrix is presented
** Correlation is significant at the 0.01 level (2-tailed)

The correlation matrix of the criterion and predictor variables revealed that out of the three predictor variables, the variable emotional exhaustion has the highest correlation (0.972) with the criterion variable, burnout – total (labeled as Y) and therefore emotional exhaustion (labeled as X_1), was taken as the first variable to be entered for regression analysis.

Step – I

The variable selected for step - analysis is emotional exhaustion (X_1). The result of step – I analysis is given in Table 4.

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Table 4: *Results of Step – I Regression Analysis Related to Burnout*

Variable Entered on Step I	:	Emotional exhaustion (X_1)	Criterion Variable	:	Burnout -total (Y)
Multiple Correlation, R	:	0.972	Standard Error (S.E.) of R	:	6.786
Percentage Variance (R^2 x 100):	:	94.5			
Constant, B_o	:	18.571	Standard Error (S.E.) of B_o	:	1.158
t-Values for B_o	:	16.033**			
Partial Regression Coefficient, B_1	:	2.189	Standard Error (S.E.) of B_1	:	0.030
t-Value for B_1	:	71.776**			
Standardized Partial Regression Coefficient, β_1	:	0.972			

Source	Sum of Squares	df	Mean Square	F
Regression	237263.808	1	237263.808	5151.760 (p < 0.01)
Residual	13724.362	298	46.055	
Total	250988.170	299		

** Significant at 0.01 level.

Table-4 shows that the F-value (5151.760) is much greater than the value set for significance at 0.01 level for (1,298) degrees of freedom. This suggests that the variable, emotional exhaustion is highly significant in predicting burnout-total. The percentage variance accounted for by the variable emotional exhaustion in predicting burnout is 94.5. This suggests that 94.5 per cent of the variation in the variable burnout can be accounted for by the variation in the variable emotional exhaustion. This also suggests that the remaining percentage of variance is attributable to the variation of the variables not used in Step I analysis.

The partial regression coefficient (B_1) is 2.189. This value indicates that scores of burnout would change by 2.189 units for every unit change in the emotional exhaustion.

The general format in which the multiple regression equation may be written as

$Y^1 = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + ...+ B_n X_n$. Where Y^1 is the predicted score of the criterion variable (burnout), B_o is a constant, $B_1, B_2, B_{3,} .... , B_n$ are partial regression coefficients & $X_1, X_2, ... X_{n'}$ are the scores of different predictor variables.

The regression equation in this case with emotional exhaustion as the single predictor variable is

$Y^1 = B_o + B_1 X_1 = 18.571 + 2.189 X_1$

Where Y^1 refers to the score of burnout and X_1 refers to the score of emotional exhaustion. The t-values for B_o and B_1 terms are significant and hence these terms are included in the regression equation.

Step II

The second predictor variable entered is depersonalization (labeled as X_2) as this variable has the next highest partial correlation. The results of Step II analysis is given in Table 5.

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TABLE 5: Results of Step-II Regression Analysis Related to Burnout

Variables Entered	:	X_1 and X_2	Criterion Variable:	:	Burnout - total (Y)
Variable Entered in Step II	:	Depersonalization (X_2)			
Multiple Correlation, R	:	0.988	Standard Error (S.E) of R	:	4.485
Increase in R	:	0.016			
Percentage Variance (R^2 x 100)	:	97.6			
Increase in Percentage Variance	:	3.1			
Constant, B_o	:	9.202	Standard Error (S.E) of B_o	:	0.902
t-value for B_o	:	10.200**			
Partial Regression Coefficient, B_1	:	1.351	Standard Error (S.E) of B_1	:	0.047
Partial Regression Coefficient , B_2	:	1.146	Standard Error (S.E)of B_2	:	0.058
t-value for B_1	:	28.628**			
Standardized Partial Regression Coefficient, β_1	:	0.600			
Standardized Partial Regression Coefficient, β_2	:	0.412			

Source	Sum of Squares	df	Mean Square	F
Regression	245013.748	2	122506.874	6090.052 (p < 0.01)
Residual	5974.422	297	20.116	
Total	250988.170	299		

** Significant at 0.01 level.

Table-5 depicts that F-value (6090.052) obtained is much greater than the value (4.68) set for significance at 0.01 level for (2,297) degrees of freedom. This indicates that depersonalization is also highly significant in predicting burnout.

The index of predictability at this stage is 0.988 so that the percentage of variance accounted for by the variables emotional exhaustion and depersonalization are 97.6. This suggests that 97.6 per cent of variation in the criterion variable, burnout is attributable to the variation of the two variables *viz*., emotional exhaustion and depersonalization. This again suggests that by adding the variable depersonalization to emotional exhaustion, the index of prediction 'R' has changed from 0.972 to 0.988 and the percentage variance has increased from 94.5 to 97.6. The increase in R is 0.016 and the increase in percentage variance is 3.1. Also, the remaining percentage of variance is attributable to the variation of the variable not used in Step II analysis.

To find out the relative efficiency of the variables emotional exhaustion and depersonalization to predict burnout, the R^2 as $\Sigma\beta r$ where β is partial regression coefficient of the predictor variable concerned and r is coefficient of correlation of the predictor variable concerned with burnout, was computed. It can be noted that of the 97.6 percentage of the variance in the criterion variable, 58.3 percentage of variance is accounted by the variable emotional exhaustion (X_1) and 39.3 percentage of variance is accounted by the variable depersonalization (X_2).

The partial regression coefficient is 0.047 (B_1) for emotional exhaustion and 0.058 (B_2) for reduced personal accomplishment. These values indicate that the scores of burnout of teachers would change by

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0.047 units for every unit change of emotional exhaustion and 0.058 units for every unit change of depersonalization.

The standardized partial regression coefficient (β) is not reaching the value 1. Hence the problem of mutlicollinearity is minimized. The t-value for B_o, B_1, and B_2 terms were noted for its significance at 0.01 level. Since these t-values were found significant, it can be included in the regression equation. The equation to the regression line in this case is

$$Y^1 = B_0 + B_1 X_1 + B_2 X_2.$$
$$Y^1 = 9.202 + 1.351 X_1 + 1.146 X_2$$

Where Y^1 is score of burnout and X_1 and X_2 are scores of emotional exhaustion and depersonalization respectively.

Step III

TABLE 6: Results of Step III Regression Analysis Related to Burnout

Variables Entered	:	X_1, X_2 and X_3	Criterion Variable	:	Burnout total (Y)
Variable Entered in Step III	:	Reduced personal accomplishment (X_3)	Standardized Partial Regression Coefficient, β_1	:	0.444
Multiple Correlation, R	:	1	Standardized Partial Regression Coefficient, β_2	:	0.359
Increase in R	:	0.012	Standardized Partial Regression Coefficient, β_3	:	0.256
Percentage Variance (R^2 x 100)	:	100	Standard Error (S.E) of R	:	0
Increase in Percentage Variance	:	2.4			
Constant, B_o	:	: 0			
t-value for B_o	:				
Partial Regression Coefficient, B_1	:	1	Standard Error (S.E) of B_1	:	0
Partial Regression Coefficient, B_2	:	1	Standard Error (S.E) of B_2		0
Partial Regression Coefficient, B_3	:	1	Standard Error (S.E) of B_3	:	0
t-value for B_1	:	-			
t-value for B_2	:	-			
t-value for B_3	:	-			

The last predictor variable entered in regression analysis is reduced personal accomplishment (X_3).

The results after Step-III (final step) showed that the value of multiple correlation (R) is 1. It can be seen that the percentage variance is 100. This indicates that the three predictors put together could explain 100 percentage of variance of burnout of teachers. The percentage variance has been raised from 97.6 to 100, the increment in percentage variance being 2.4. The R has also changed from 0.988 to 1.000 and the increase in R is 0.012.

The relative efficiency of the predictor variables *viz*., emotional exhaustion, depersonalization and reduced personal accomplishment to predict burnout were determined. It can be noted that of this 100 percentage of variance in the criterion variable, 43.2 percentage of variance is accounted by the predictor variable emotional exhaustion, 34.3 percentage of the variance is accounted by the predictor variable

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depersonalization and 22.5 percentage of variance is accounted by the predictor variable reduced personal accomplishment.

The t-values for B_o, B_1, B_2, and B_3 were significant at 0.01 level. Hence these terms are included in the regression equation. The standardized partial regression coefficient, β is not reaching the value 1. Hence the problem of mutlicollinearity is minimized. The value of constant is zero. Therefore the regression equation at this stage is

$$Y^1 = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3$$
$$Y^1 = 0 + 1 X_1 + 1 X_2 + 1 X_3$$
i.e. $$Y^1 = Y = X_1 + X_2 + X_3$$

Where $Y^1 = Y$ is score of the burnout of teachers and X_1, X_2 and X_3 are the scores of three predictor variables.

In short, to identify the best predictor of burnout-total of a teacher, its three dimensions were treated as the predictor variables. The step-wise multiple regression analysis (ANOVA approach) was carried out for all the three predictor variables. In the third step the shared variance reached hundred. Hence the process reached at an end.

CONCLUSION

Results of the step-wise regression analysis discussed so far enabled the investigator to identify the best predictor and their relative contribution to the percentage variance of burnout of teachers. It is given as follows along with the Beta-weights.

Step No.	Predictors	Percentage of Variance	β-weights
1	Emotional exhaustion	94.5	0.444
2	Depersonalization	3.1	0.359
3	Reduced personal accomplishment	2.4	0.256
	Total	100	

Of the three predictor variables, the variable emotional exhaustion accounted for 94.5 percentage of variance in burnout-total of teachers. The least percentage of variance is accounted for the variable, reduced personal accomplishment. Hence it can be concluded that the best predictor of burnout is emotional exhaustion. Therefore the hypothesis is accepted.

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