

Factors Associated with Job Satisfaction among Government School Teachers in Nuwara- Eliya District of Sri Lanka

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Rathnayake, R.M.L.^{1*} and Jagoda, D.J.²

^{1, 2} Department of Economics and Statistics, Sabaragamuwa University of Sri Lanka, 70140, Belihuloya, Sri Lanka.

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Abstract

Job satisfaction among teachers has received immense importance in increasing the quality of education. Students' performance in schools will never be improved without teachers' commitment, effectiveness to work at school, and job satisfaction. The teachers in government schools in Sri Lanka are frustrated with their job. This study aims to examine the determinants of job satisfaction among teachers in government schools in Sri Lanka. The study was conducted in the Nuwara Eliya district. A sample of 352 teachers was selected using multi-stage stratified random sampling. Descriptive statistics, principal components factor analysis, and multiple binary logistic regression models were used in data analysis. Descriptive statistics show that most sample teachers are female (65%) and married (62%). The principal components factor analysis extracted two factors labeled as community factors and school factors from 13 dimensions describing teachers' job satisfaction based on eigenvalues. The multiple binary logistic regression model results indicate that community factors, school factors, gender, and educational qualification were significant in the model to explain the teachers' job satisfaction. Further, the odds ratio for community factors is greater than 1 and positively related to Teacher's job satisfaction. Similarly, School factors too have built a positive relationship. The model predicts the probability of being satisfied for the female is 0.52 while it is 0.21 for the male. The probability of being satisfied for degree holders is 0.02 while it is 0.52 for diploma teachers compared to trained teachers. It is concluded that attention should be paid to community factors and school factors to enhance the teachers' job satisfaction to improve the quality of education.

Keywords: Community factors, Factor analysis, Job satisfaction, School factors, Teachers

INTRODUCTION

Employees' job satisfaction is an essential concern in job performance, which leads to enhancing any organization's productivity. An employee's effective orientation towards his or her work is job satisfaction (Price, 2001). Job satisfaction is closely linked to an individual's behavior in the workplace (Davis & Nestrom, 1985). In the world context, the researchers have paid much attention to job satisfaction among different types of employees. Job satisfaction among teachers has received immense importance in increasing the quality of education. Today, education has become a valuable investment in human capital to achieve social and national development. A low level of education is liable for creating economic, socio-cultural, and environmental problems and directly affecting the development of a nation (Kappagode, 2013). Teachers play a dynamic role in education and the student's performance in schools will never be improved without teachers' commitment and effectiveness to work at school. Teachers' job satisfaction is essential for succeeding in qualitative education through effective involvement and true commitment to teaching. According to Kefalidou et al. (2015), the two main factors affecting educational improvement are teachers' job satisfaction and professional empowerment. In Sri Lanka, the government has been paying much attention to improving education standards at all levels.

However, educational performance associated with some exams in Sri Lanka is not satisfactory. Considering the performance of the G.C.E. Advanced Level examination, the most critical exam in the education system in Sri Lanka, the following table indicates evidence of malicious fluctuation in educational performance.

Table 1: Percentages with A3 and fail in all for G.C.E. Advance Level Examination

Year	2015	2016	2017	2018	2019	2020
A for All	2.83	3.05	3.62	2.25	3.12	2.90
Fail in All	8.64	8.36	8.21	8.34	8.91	8.64

Source: Department of examination, 2020

Table 1 shows the percentage of students having A 3 and failing in all for the G.C.E. Advanced Level examination from 2015 to 2020. It seems that the percentage of failing in all is much higher than the percentage of A for all. In addition, considering the performance of all candidates in the province in 2020, the Central province recorded 9.22% (Department of Examination, 2020) of students failing in all subjects. Enhancing educational performance is strongly related to teachers' job satisfaction. It is believed that for qualitative

* Corresponding author: Tel.: +94 (71) 568 9664; Email: rathna@ssl.sab.ac.lk

<https://orcid.org/0000-0002-2243-1480>



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development in education, teachers' job satisfaction is an essential phenomenon (Yusuf et al., 2015). Identifying the factors affecting teacher job satisfaction is timely and nationally vital to guide the educational system to achieve its objectives. It is important in the effort to enhance the qualitative educational level. However, studies on determinants of teachers' job satisfaction are limited. The objective of this study is to identify the determinants of job satisfaction among teachers in government schools in Sri Lanka.

LITERATURE REVIEW

Job satisfaction is a combination of psychological, physiological, and environmental circumstances (Sen, 2008). Judge et al. (2012) pointed out three components of individuals' psychological responses toward their job such as cognitive (evaluative), affective (or emotional) and job satisfaction is a set of those psychological responses. Castillo & Cano (2004) examined that the work itself was the most important factor that influenced job satisfaction, with working conditions being the least important. Teacher job satisfaction is defined as a teacher's feelings and perceptions of happiness and contentment with teaching (Agyekum et al., 2013).

Job satisfaction and motivation are interrelated even though they are different two concepts. The relationship between the two concepts of motivation and job satisfaction suggests that theories of motivation are also considered theories of job satisfaction (Ngimbudzi, 2009). Job satisfaction is appeared to be positively correlated with motivation i.e. an increase in motivation causes to increase in job satisfaction while a decrease in motivation causes to decrease in job satisfaction (Singh & Tiwari, 2011).

Usually, two approaches are available in studying theories of motivation such as content theories and process theories. Content theories are also called need theories. Content theories or need theories include Maslow's hierarchy of needs, Macgregor's theory X and theory Y, Herzberg's two-factor theory, McClelland's achievement motivation theory, and Alderfer's existence theory. Several theories including Locke's value theory, Expectancy theory, Equity theory, Goal theory, and Attribution theory belong to process theories (Miner, 2005). However, it is believed that the Motivation/Hygiene theory is one of the most reliable content theories for investigating job satisfaction (Worlu & Chidoze, 2012). Motivation-hygiene theory is familiar with the two terms of Herzberg's two-factor theory and Herzberg's dual-factor theory. Motivation/hygiene theory discusses two aspects of job preference; satisfaction and dissatisfaction. Under motivation/hygiene theory, Herzberg has established two groups of factors that cause job satisfaction or dissatisfaction; intrinsic factors called motivational and extrinsic factors called hygiene (Miner, 2005). The key concept behind Motivation/hygiene theory is the difference between these motivation and hygiene factors, or intrinsic and extrinsic factors. According to Herzberg, motivational factors are associated with job satisfaction and work in increasing or improving job satisfaction (Miner, 2005). Achievement, advancement, recognition, responsibility, the work itself, and the possibility for growth are the motivation factors (Herzberg, 1966). Hygiene factors are associated with job dissatisfaction and work for reducing job dissatisfaction (Miner, 2005). Company policies and administration, relationships with supervisors, interpersonal relations, working conditions, and salary are considered Hygiene factors (Herzberg,

1966). The existence of motivational factors causes job satisfaction and the absence of those factors causes no job satisfaction. Poor hygiene factors lead to job dissatisfaction, while better hygiene factors reduce dissatisfaction. However, it cannot cause job satisfaction (Herzberg et al., 1959). According to Herzberg (1966), the opposite of job dissatisfaction is no job dissatisfaction while the opposite of job satisfaction is no job satisfaction.

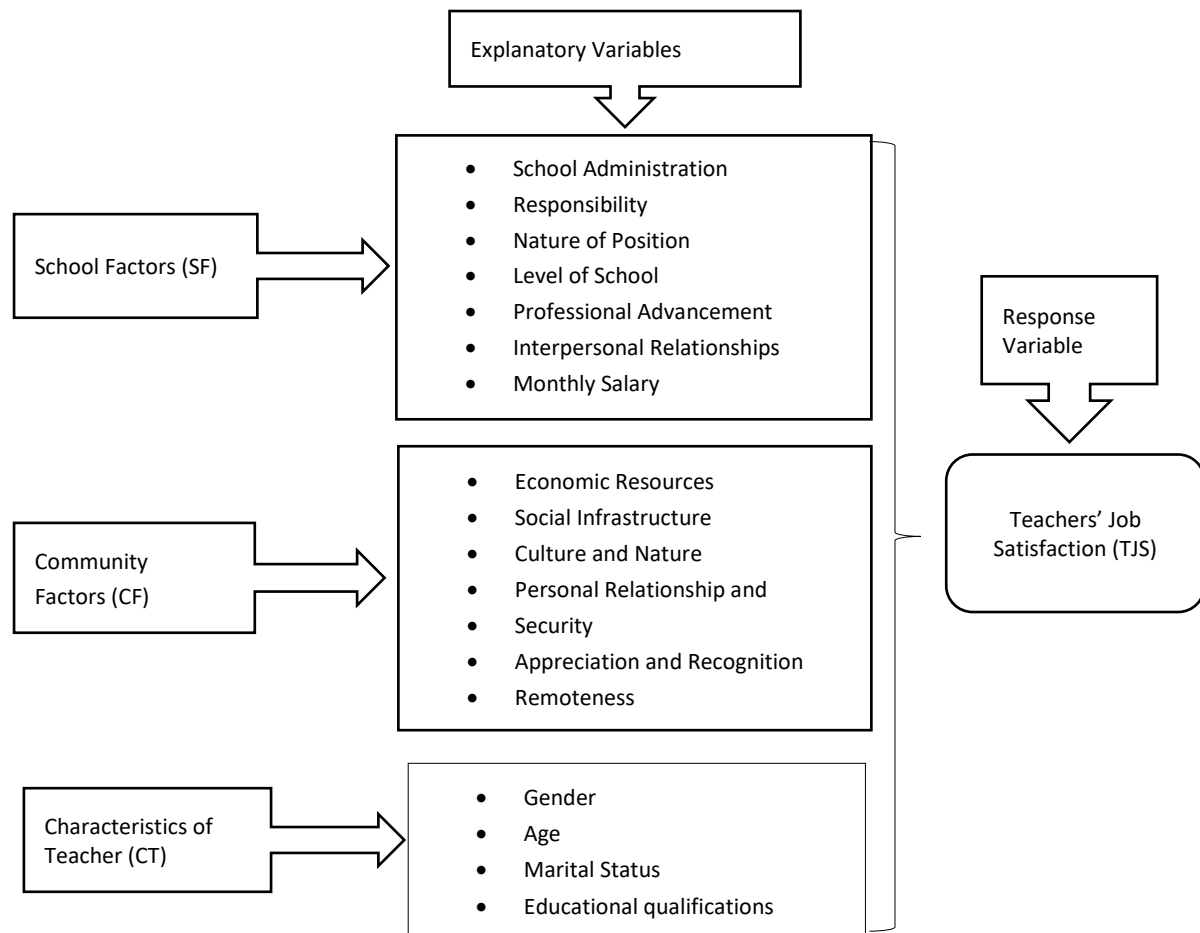
Previous studies have identified some determinants that affect teachers' job satisfaction. Among them, the administration is established as an important factor. According to Talabi (2016), teachers possess satisfaction from the administration. According to the study conducted by Mahmood et al. (2011), the administration was related to teachers' job satisfaction. According to Hui et al., (2013), a significant positive relationship exists between leadership and decision-making styles of principals and teachers' job satisfaction. Vroom suggests that administration affects job satisfaction (Aziri, 2011). And also, the same study found that supervision was related to teachers' job satisfaction. Further, Pabla (2012) revealed that the level of decision-making authority is a significant factor in job satisfaction among teachers. The variables of autonomy and participation in the decision had the greatest effect on job satisfaction (Dogan, 2009). Considering responsibility, according to Herzberg (1966), responsibility is an associated factor for job satisfaction. According to Talabi (2016), teachers possess their satisfaction from responsibilities. According to Kefalidou et al. (2015), not being permanent in a position in a school and being obliged to change school environment every year, or happen to work in more than one school each year, cause to teachers be less empowered and satisfied. Vroom suggests that job nature and working conditions affect job satisfaction (Aziri, 2011). According to the study conducted by Mahmood et al. (2011), working conditions were related to teachers' job satisfaction. The level of role clearness and job involvement had the greatest effect on job satisfaction (Dogan, 2009). Pabla (2012) revealed that the level of general working conditions is a significant factor in job satisfaction among teachers. As found by Rahman (2008), the type of college has influenced on overall job satisfaction of teachers. Further, he has revealed that private college teachers are interested to have modern classroom equipment and technological facilities. According to Pabla (2012), disparities between rural and urban schools are the main reasons for the differences in job satisfaction between teachers who work in rural and urban areas. According to Herzberg (1966), job satisfaction is related to advancement. Pabla (2012) revealed that opportunities for professional advancement are a significant factor in job satisfaction among teachers. According to the study conducted by Mahmood et al. (2011), advancement was related to teachers' job satisfaction. Further, according to Talabi (2016), teachers possess satisfaction from advancement opportunities. Vroom suggests that promotion affects job satisfaction (Aziri, 2011). According to Kaliski (2007), job satisfaction is the key ingredient that leads to promotion. Pabla (2012) revealed that the level of interactions with colleagues and interaction with students is a significant factor in job satisfaction among teachers. Vroom suggests that superiors and colleagues affect job satisfaction (Aziri, 2011). As found by previous studies, the salary was a key factor for teachers' job satisfaction. Pabla (2012) revealed that salary is a significant factor in job satisfaction among teachers. According to the study conducted by Mahmood et al. (2011), the salary was related to teachers' job satisfaction. Rahman (2008) showed that teachers have

considered much on their payment. According to Kaliski (2007), job satisfaction is the key ingredient that leads to income. Vroom suggests that salary remuneration affects job satisfaction (Aziri, 2011). According to Talabi (2016), teachers possess satisfaction from fringe benefits. Pabla (2012) revealed that benefit is a significant factor for job satisfaction among teachers. The variables of health facilities, training, and educational facilities had the greatest effect on job satisfaction (Dogan, 2009). Teachers' job satisfaction is highly affected by teachers' occupational perception (Bogler, 2001). Through these occupational perceptions, the impact of principals' transformational leadership on teachers' job satisfaction is observed. According to the study conducted by Mahmood et al. (2011), human relation was related to teachers' job satisfaction. Pabla (2012) revealed that the level of personal and professional challenges are significant factors for job satisfaction among teachers. According to Herzberg (1966), job satisfaction is related to recognition. Kaliski (2007) has found that job satisfaction is the key ingredient that leads to recognition. According to Talabi (2016), teachers possess satisfaction from recognition. Pabla (2012) revealed that prestige is a significant factor in job satisfaction among teachers. According to Kaliski (2007), job satisfaction is the key ingredient that leads to the achievement of other goals. According to Herzberg (1966), job satisfaction is related to achievement. Pabla (2012) discovered that job satisfaction among rural school teachers is less than among urban school teachers. According to the study conducted by Mahmood et al. (2011), a significant difference in job satisfaction was not found between urban and rural teachers. It is generally accepted that demographic factors may play a role in the level of job satisfaction (Bogler, 2001). Many previous studies have found that teachers' characteristics; gender, age, marital status, and educational qualifications are related to job satisfaction. According to Rahman (2008), gender has been decided as a significant determinant that influences on job satisfaction of teachers. Sharma & Jyoti (2006) have concluded that job satisfaction among female teachers is more than that among male teachers. Rahman (2008) too concluded that female teachers were more satisfied than their male counterparts. According to the study conducted by Mahmood et al. (2011),

female teachers are found to be more satisfied than male teachers. According to Rahman (2008), age has been decided as a factor that did not affect on job satisfaction of teachers. According to the study conducted by Crossman & Abou-Zaki (2003) with Lebanese bank, employees have decided that lower educational qualifications were related to least job satisfaction. According to Talabi (2016), teachers possess satisfied with educational policies. According to Sumanasena et al. (2020), the nature of work, recognition, responsibility, advancement, and personal growth have a relationship with job satisfaction among teachers as the intrinsic factors while school policy and administration, supervision, interpersonal relationships, and job security were significant as extrinsic factors.

Literature shows various categories of determinants for teachers' job satisfaction. De Nobile and McCormick (2006) have identified three groups of determinants that cause teacher satisfaction. It includes School factors, Community factors, and Characteristics of Teachers. Teachers' satisfaction in Ghana too was determined by three sets of factors; school factors, community factors, and the characteristics of the teacher (Agyekum et al., 2013). These determinants are obvious in developing countries (Agyekum et al, 2013). This study attempts to study the determinants of teachers' job satisfaction focusing on the three categories identified by De Nobile and McCormick (2006). Following, De Nobile and McCormick (2006), the three main categories of determinants of Teachers' job satisfaction (TJS) tested in this study are School factors (SF), Community factors (CF), and Characteristics of teachers (CT). School factors are derived based on several dimensions related to school while the Community factors are derived based on several dimensions related to the community. Characteristics of the teacher include demographic characteristics such as age gender etc. In this study, 17 dimensions/variables (questions or statements) related to teachers' job satisfaction (TJS) in government schools in Sri Lanka were considered reflecting those three categories. This study used overall teacher job satisfaction as the dependent variable. Figure 1 shows the conceptual framework for this study.

Figure 1: Conceptual Framework



Source: Developed by the researcher, 2021

Based on the literature review and as shown by the conceptual framework, this study constructed a hypothesis as given below.

H1: There is an impact of CF on TJS of school teachers in Sri Lanka

H2: There is an impact of SF on TJS of school teachers in Sri Lanka

H3: There is an impact of CT on TJS of school teachers in Sri Lanka

MATERIALS AND METHOD

This study employed a quantitative research approach to achieve the objectives. Primary data collected through a structured questionnaire was used in this study. The population size is the total number of teachers in the Nuwara Eliya educational zone, which is 9933 (Ministry of Education, 2017). The sample size was 370 and it was decided based on the Morgan table developed by Krejcie & Morgan, (1970). Multi-stage stratified sampling was applied to select a sample of teachers from government schools in Sri Lanka. Nuwara Eliya district was selected randomly from 25 districts in the first stage. Nuwara Eliya district has been divided into five educational zones: Haguranketha, Hatton, Kothmale, Walapane, and Nuwara-Eliya Nuwara Eliya educational zone was selected randomly for the study at the second stage. In Sri Lanka's educational system, the government schools are divided into four categories as Type1AB, Type1C, Type 2, and Type 3, and representing all these types sample sizes were distributed for each category based on proportional allocation. The questionnaire was distributed to 370 respondents.

However, only 95% (352) of them have responded while 5% (18) have not responded. The lottery method was adopted in selecting a district and an educational zone while a random number table was adopted in selecting the final element, teachers for the study to ensure randomness.

The construction of the questionnaire was based on the literature review and it focused on the three categories of determinants identified by De Nobile and McCormick (2006). The questionnaire included mainly two parts. The First part focused on the determinants associated with teachers' job satisfaction with the aspect of Community Factors (CF), School Factors, and Characteristics of Teachers (TC) identified by De Nobile and McCormick (2006). 17 dimensions/variables (questions or statements) related to teachers' job satisfaction (TJS) in government schools in Sri Lanka were included reflecting those three categories. Many of them were measured on a 5-point Likert scale for Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA). For example "I work in an area with greater economically resourced communities (Opportunities are available to engage in production, profit and income generating activities)" and "My monthly pay is enough for providing necessary things in my life" are the statements for the variables, Economic Resources, and Monthly Salary respectively. Respondents are instructed to mark each statement using a 5-point Likert scale. The responses were received by adopting numerical values ranging from one for Strongly Disagree to five for Strongly Agree. A few were measured on a binary or multi-category nominal scale. In addition, overall job satisfaction was measured by including one question, "By overall consideration, I would satisfy to be

in teaching". For this statement, a binary nominal scale was used for the response, 1 for "yes" and 0 for "no". A description of the variables is given in table 2.

Table 2: Description of variables used in the analysis

Variables	Abbreviation	Measurement Scale	Variables	Abbreviation	Measurement Scale
Economic Resources	ER	Ordinal Likert's scale 1-5	Level of School	LS	Ordinal Likert's scale 1-5
Social Infrastructures	SI	Ordinal Likert's scale 1-5	Professional Advancement	PA	Ordinal Likert's scale 1-5
Culture and Nature	CN	Ordinal Likert's scale 1-5	Interpersonal Relationships	IR	Ordinal Likert's scale 1-5
Personal Relationship and Security	PR	Ordinal Likert's scale 1-5	Monthly Salary	MA	Ordinal Likert's scale 1-5
Appreciation and Recognition	AR	Ordinal Likert's scale 1-5	Gender	GE	Nominal- binary
Remoteness	RM	Ordinal Likert's scale 1-5	Age	AG	Continuous
School Administration	SA	Ordinal Likert's scale 1-5	Marital Status	MS	Nominal- binary
Responsibility	RE	Ordinal Likert's scale 1-5	Educational Qualifications	EQ	Nominal Multi Category
Nature of Position	NP	Ordinal Likert's scale 1-5	Overall Job Satisfaction	OJS	Nominal- binary

Source: Developed by the researcher, 2021

This study mainly employed two techniques, Principle Components Factor Analysis and the Multiple Binary Logistic Regression model to analyze data. In addition, descriptive statistical analyzing techniques were used to identify the special characteristics of the sample. Factor analysis was used to reduce a large number of variables, 13 dimensions (variables) related to job satisfaction which were measured in Likert's scale into fewer numbers of factors. In Factor Analysis, initial factors are decided by principle components analysis. Factor loadings derived using varimax rotation with Kaiser normalization were used to put labels on factors. Factor analysis extracted the maximum common variance from all variables and put them into a common score. As an index of all variables, this score was used for further analysis. The factor model used in the analysis is given below.

$$Z_1 = a_1^T X = a_{p1}X + a_{11}X_1 + \dots + a_{pp}X_p$$

$$Z_2 = a_2^T X = a_{p2}X + a_{22}X_2 + \dots + a_{pp}X_p$$

$$Z_p = a_p^T X = a_{pp}X + a_{pp}X_p + \dots + a_{pp}X_p$$

Derived factors and some other variables were used as explanatory variables in the Multiple Binary Logistic Model to identify the determinants of teachers' overall job satisfaction. The binary dependent variable is Being satisfied and Not being satisfied. Independents variables are factors derived from principle components factor analysis, gender, age, marital status, and Educational qualifications.

Table 3: Types of Explanatory Variables for Multiple Binary Logistic regression analysis

Explanatory Variable	Continuous	Categorical
Factor 1	✓	
Factor 2	✓	
Age	✓	
Gender		✓
Marital status		✓
Educational Qualification		✓

Source: Developed by the researcher, 2021

Table 3 indicates that the variables used for Multiple Binary Logistic regression analysis belonged to continuous, binary categorical, and multi-categorical. To check whether the assumptions for logistic regression are violated, types of explanatory variables are essential. The test used for checking multicollinearity depends on the types of explanatory variables.

The Multiple Binary Logistic Regression model is used in the analysis as follows

Wald test Statistics as given below were applied to check the significance of each explanatory variable.

$$W_\tau = \frac{[\hat{\theta} - \theta_0]^2}{1/I_n(\hat{\theta})} = I_n(\hat{\theta}) [\hat{\theta} - \theta_0]^2$$

The overall goodness of fit of the logistic model was assessed by his test statistics as given below.

$$G^2_{HL} = \sum_{j=1}^{10} \frac{(O_j - E_j)^2}{E_j(1 - E_j/n_j)} \sim \chi^2_8$$

In addition to the main analysis, several tests, Pearson's coefficient of correlation, T-test, ANOVA, Chi-square test, Q-Q

plot, KMO test, and Bartlett test of sphericity were utilized to fulfill some requirements for the main analysis.

RESULTS AND DISCUSSION

Key Characteristics of Respondents

Key teacher characteristics considered in this study are age, gender, educational qualification, and marital status of teachers working in government schools in the Nuwara Eliya district.

Table 4: Teachers' Job satisfaction by Gender, Educational qualification, and Marital Status

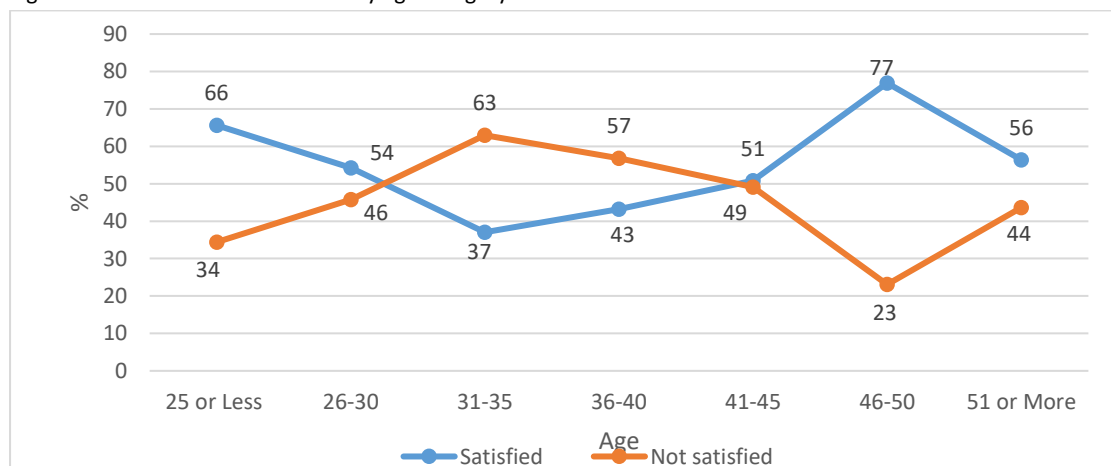
Characteristics	Categories	Satisfaction		All (%)
		Yes (%)	No (%)	
Gender	Female	53	47	65
	Male	27	73	35
Total		196	156	352
Educational Qualifications	Bachelor	36	64	38
	Diploma	46	54	46
	Training	61	39	16
Total		196	156	352
Marital Status	Married	38	62	62
	Not married	50	50	29
	widowed	65	35	6
	Divorced/separated	67	33	3
Total		196	156	352
Overall Job Satisfaction		56	44	

Source: Researcher's finding using sample survey day analysis, 2021.

The sample consisted of 352 teachers from the population of government teachers who work in the Nuwa Eliya district. Table 4 shows the distribution of the sample based on gender, education qualification, marital status and overall job satisfaction. Considering overall job satisfaction, 56% of teachers have satisfied with their job while 44% have not satisfied. Considering the gender distribution of the sample, the female percentage was 65% and the male percentage was 35%. Job satisfaction among males is (27%) lesser than the

female (53%). The majority of the teachers (46%) are qualified with a diploma and the job satisfaction of graduate teachers (36%) is lesser than the job satisfaction among diplomatic (46%) and trained teachers (61%). Most of the teachers in the sample (62%) were married while the unmarried percentage was 32% and widowed and divorced/separated percentages were 6% and 3% respectively. Job satisfaction among married teachers (38%) is lesser than among unmarried teachers (50%).

Figure 2: Teachers' Job satisfaction by age category



Source: Researcher's finding using sample survey day analysis, 2021

Figure 2 shows the percentages of satisfied and not satisfied teachers with their job by age group. For the age group 31-35 and 36-40, the percentage of satisfaction (37%,43%) is lower than the percentage of dissatisfaction while for the age groups 25 or less, 26-30, 46-50, and 51 or more, percentage with satisfaction (66%,54%,77%,56%) is higher than the percentage with dissatisfaction. The highest percentage (63%) of dissatisfaction was recorded for the age group 31-35 while the highest percentage (77%) of satisfaction was recorded for the age group 46-50.

Variables Reduction

Factor analysis was used for the reduction of 13 variables into fewer factors. The key requirement for principle components factor analysis is a correlation among variables. The correlation among these 13 variables is given in table 5 and it shows most of the variables are highly correlated. The correlation matrix and the Kaiser-Meyer-Olkin (KMO) test were applied to assess the suitability of principal components factor analysis for the collected data.

Table 5: Correlation Matrix

		ER	SI	CN	PI	AR	RM	SA	RE	NP	LS	PA	IR
SI	Correlation Coe.	.889											
	Sig.	.000											
CN	Correlation Coe.	.289	-.148										
	Sig.	.003	.141										
PI	Correlation Coe.	.918	.645	.574									
	Sig.	.000	.000	.000									
AR	Correlation Coe.	.921	.740	.289	.918								
	Sig.	.000	.000	.003	.000								
RM	Correlation Coe.	.973	.913	.216	.825	.865							
	Sig.	.000	.000	.031	.000	.000							
SA	Correlation Coe.	-.459	0.000	-.918	-.750	-.574	-.354						
	Sig.	.000	1.000	.000	.000	.000	.000						
RE	Correlation Coe.	.395	.740	-.763	.057	.342	.460	.574					
	Sig.	.000	.000	.000	.571	.000	.000	.000					
NP	Correlation Coe.	.892	.761	.406	.884	.730	.806	-.471	.189				
	Sig.	.000	.000	.000	.000	.000	.000	.000	.059				
LS	Correlation Coe.	-.081	.152	-.135	-.295	-.460	.028	.471	.081	.111			
	Sig.	.422	.131	.180	.003	.000	.784	.000	.422	.271			
PA	Correlation Coe.	-.158	.296	-.921	-.459	-.289	-.108	.918	.763	-.135	.406		
	Sig.	.117	.003	.000	.000	.003	.284	.000	.000	.180	.000		
IR	Correlation Coe.	.205	.577	-.872	-.112	.205	.264	.671	.975	0.000	0.000	.821	
	Sig.	.041	.000	.000	.268	.041	.008	.000	.000	1.000	1.000	.000	
MA	Correlation Coe.	-.158	.296	-.921	-.459	-.289	-.108	.918	.763	-.135	.406	0.912	.695
	Sig.	.117	.003	.000	.000	.003	.284	.000	.000	.180	.000	.000	.000

Source: Researcher's finding using sample survey day analysis, 2021

Bartlett test of sphericity was applied to assess the overall correlation matrix and it was significant at the .001 level (approximate $\chi^2 = 381.05$). It found that the value of the KMO

test is 0.81 and it is greater than .50 and significant. Both values indicate that the data was appropriate for principal components factor analysis. Table 6 shows a critical portion of the results of the principle components factor analysis.

Table 6: Eigenvalues of Principal Component Factor Analysis

Factor	Total	% of Variance	Cumulative %
1	6.53	50.227	50.227
2	4.874	37.492	87.719
3	1.351	10.393	98.112
4	0.245	1.888	100
5	1.01E-13	1.11E-13	100
6	1.00E-13	1.03E-13	100
7	1.00E-13	1.01E-13	100

8	-1.00E-13	-1.02E-13	100
9	-1.00E-13	-1.02E-13	100
10	-1.01E-13	-1.06E-13	100
11	-1.01E-13	-1.07E-13	100
12	-1.01E-13	-1.11E-13	100
13	-1.03E-13	-1.20E-13	100

Source: Researcher's finding using sample survey day analysis, 2021

As shown in Table 6, the Eigenvalue of the first factor is 6.53 and it has explained 50.2% of the variance for the original 13 variables while the eigenvalue for the second factor is 4.87 and it explained 37.5% of the variance. It shows that 87.7%

of the variance for original variables is accounted for by the first two factors together. It reveals that the first two factors extracted from 13 dimensions by the principal components method are sufficient and significant to reflect 13 variables.

Table 7: Factor Loadings of extracted two factors

Components (Variables)	Factor 1 Loadings	Factor 2 Loadings
Economic Resources	-0.093	0.994
Social Infrastructures	0.455	0.887
Culture and Nature	-0.906	0.356
Personal Relationship and Security	-0.501	0.852
Appreciation and Recognition	-0.18	0.931
Remoteness	0.001	0.978
School Administration	0.877	-0.459
Responsibility	0.907	0.362
Nature of Position	0.852	-0.045
Level of School	0.348	-0.009
Professional Advancement	0.98	-0.15
Interpersonal Relationships	0.916	0.209
Monthly Salary	0.98	-0.15

Source: Researcher's finding using sample survey day analysis, 2021

Table 7 provides the factor loadings derived by varimax rotation with Kaiser normalization. Factor loadings were used to decide on components for each factor and to put labels

on factors by investigating the components. Of 13 variables, 7 are more related to factor 1 than factor 2. Of 13 variables, 6 are more related to factor 2 than factor 1.

Table 8: Factor Scores, Factor label, and reliability

Factor Label	Variables	Eigenvalues			Variance %			Cumulative Variance %			Reliability (Alpha)			
Factor 1 School Factors (SF)	School Administration													
	Responsibility													
	Nature of Position													
	Level of School	6.53			50.2			50.2			0.79			
	Professional Advancement													
	Interpersonal Relationships													
	Monthly Salary													
	Factor 1 Factor scores	.009	.103	-.151	-.066	-.008	.025	.143	.169	.014	.061	.169	.167	.169
		ER	SI	CN	PR	AR	RM	SA	RE	NP	LS	PA	IR	MS

Factor Label	Variables	Eigenvalues			Variance %			Cumulative Variance %			Reliability (Alpha)			
Factor 2 Community Factors (CF)	Economic Resources	4.87			37.5			87.7			0.69			
	Social Infrastructures													
	Culture and Nature													
	Personal Relationship and Security													
	Appreciation and Recognition													
	Remoteness													
	Factor 2 Factor scores	.179	.173	.041	.142	.165	.178	-.061	.089	.154	.007	-.002	.062	-.002
		ER	SI	CN	PR	AR	RM	SA	RE	NP	LS	PA	IR	MS

Source: Researcher's finding using sample survey day analysis, 2021.

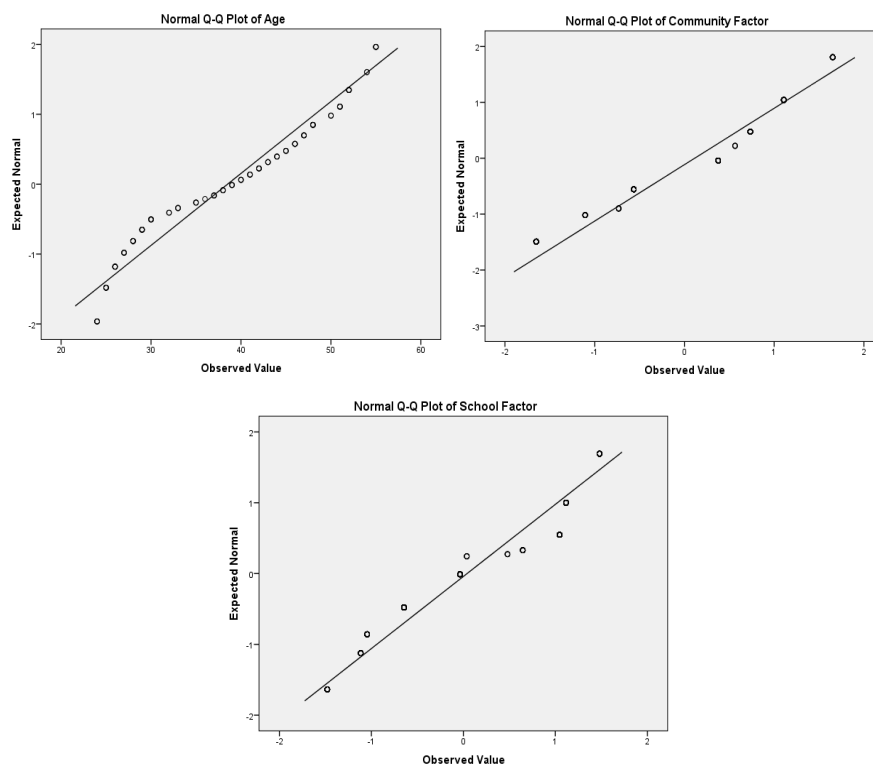
Factor 1 measures the extent of School Administration, Responsibility, Nature of Position, Level of school, Professional advancement, Interpersonal relationships, and Monthly Salary. Therefore factor 1 can be labeled as "School Factors as given in table 8. Factor 2 measures the extent of Economic Resources, Social Infrastructures, Culture and Nature, Personal relationships and Security, Appreciation and Recognition, and Remoteness. Therefore, factor 2 can be labeled as "Community Factors as given in table 8.

The reliability of each factor was assessed by reliability alpha (Cronbach's alpha). As shown in table 8, the reliability alpha for both factors is greater than 0.60 ensuring that the factors are reliable. Further, the explanation of 87.7% of the total variability of the original 13 variables by the first two variables indicates the sufficiency and significance of School factors and community factors to reflect all 13 variables.

Determinants for Teachers' Job Satisfaction

Multiple binary logistic regression techniques were applied to identify the determinants of teachers' job satisfaction. Overall job satisfaction of teachers among government schools measured in nominal binary scale was used as response variables. The two factors extracted by principal components analysis which are reflecting job attribute variables and Age, Gender, Marital status, and Educational qualification that related to teachers' characteristics were used as explanatory variables. A prerequisite for running a multiple binary logistic regression model is independence among explanatory variables (Assumption of Multicollinearity). To use parametric techniques (ex. ANOVA, T-test) for finding relationships among continuous variables variable, the normality assumption was checked for community factors, School factors, and age.

Figure 3: Q-Q Plot for normality



Source: Researcher's finding using sample survey day analysis, 2021.

The above plots revealed that the normality assumption is satisfied for the variables, Age, Community factor, and School factor. Therefore, Pearson's correlation, T-test, and ANOVA were applied to check multicollinearity among those variables.

Table 9: Checking multicollinearity among Explanatory Variables

Determinants	Factor 1	Factor 2	Age	Educational Qual- ification	Gender
Factor 2	Pearson Correlation (p value=1.000)				
Age	Pearson Correlation (p value=0.007)	Pearson Correlation (p value=0.008)			
Educational Qualification	ANOVA (p value=0.061)	ANOVA (p value=0.211)	ANOVA (p value=0.131)		
Gender	T-test (p value=0.118)	T-test (p value=0.281)	T-test (p value=0.322)	Chi-Square (p value=0.071)	
Marital status	ANOVA (p value=0.127)	ANOVA (p value=0.059)	ANOVA (p value=0.345)	Chi-Square (p value=0.322)	Chi-Square (p value=0.218)

Source: Researcher's finding using sample survey day analysis, 2021.

Table 9 provides the results of a different kind of test for multicollinearity among all variables used for logistic regression analysis based on the variable type. It clearly shows that the relationship between Age and Factor 1 and age and factor 2 are significant at 0.01 level. Relationships among other variables are not significant. Therefore, the variable age was removed from the model due to the violation of the assumption of multicollinearity.

Table 10: Results of Multiple Binary Logistic Regression Model

Explanatory Variables	B	S.E.	Wald	Sig.	Exp(B)
Community Factors	.482	.250	3.728	.050	1.619
School Factors	.777	.253	9.477	.002	2.176
Gender (Female)	1.404	.515	7.439	.006	4.070
Marital Status			3.779	.286	
Married	-22.05	23024.1	.000	.999	.000
Unmarried	-20.95	23024.0	.000	.999	.000
Divorced	-20.18	23024.1	.000	.999	.000
Educational Qualification			7.021	.030	
Bachelor's Degree or above	-2.572	.991	6.735	1.000	.076
Diploma	1.370	.915	2.240	.134	3.936
Constant	-1.309	.429	9.306	.451	.270
-2 Log likelihood		105.244			
Hosmer and Lemeshow Test		5.941 (p value=0.547)			

Source: Researcher's finding using sample survey day analysis, 2021.

Table 10 depicts the results of the multiple binary logistic regression model. Hosmer and Lemeshow's goodness of fit test value is 5.941 with a p-value of .547, which indicated that the model adequately fits the data in this study. Wald statistic provides a test of the statistical significance of each variable in the model. The Community factors and School factors are statistically significant in the model to explain teachers' job satisfaction at 0.05 level and 0.01 levels respectively. This result was supported by the findings of previous several studies conducted by different researchers. According to Agyekum et al. (2013), teachers' satisfaction in Ghana was determined by school factors, community factors, and the characteristics of the teacher. De Nobile and McCormick (2006) have too identified three types of determinants of teacher satisfaction including community factors, school factors, and characteristics of Teachers. Gender is

statistically significant in the model at 0.01 level in this study. This result agrees with the previous work by De Nobile and McCormick (2006) that has identified characteristics of teachers including demographic characteristics, and gender as a determinant of teachers' job satisfaction. Further, this result is emphasized in the study conducted by Sharma & Jyoti (2006) and they have concluded that job satisfaction among female teachers is more than that among male teachers. Educational Qualification is statistically significant in the model to explain teachers' job satisfaction at 0.05 level in this study. Supporting this result, a pre-study conducted by Crossman & Abou-Zaki (2003) using Lebanese bank employees showed that lower educational qualifications were related to least job satisfaction.

The odds ratio for the community factor is greater than 1 and it is positively related to Teachers' job satisfaction.

When the community factor increases by one unit, the odds of being satisfied increase by 1.6 times. The model predicts the probability of being satisfied is 0.05 at the minimum level of community factors while at the maximum level it is 0.58 and it indicates a 0.53 difference in the probability of job satisfaction between the maximum and minimum level of community factors. Of teachers with a maximum level of the community factor, 58% are satisfied with teaching while only 5% of the teachers with a minimum level are satisfied. Similarly, the Odds ratio for the school factor is greater than 1 and the School factor too is positively related to job satisfaction. When the School factor increases by one unit, the odds of being satisfied increase by approximately 2 times. The model predicts the probability of being satisfied at the minimum level of the school factor is 0.06 while at the maximum level it is 0.54 and it indicates a 0.48 difference in the probability of job satisfaction between the maximum and minimum level of the School factor. Of teachers with maximum level of the School factor, 54% are satisfied with teaching while only 6% of the teachers with minimum level are satisfied.

Considering the gender, the Odds ratio of satisfaction for males and females is 4 indicating the odds of being satisfied are 4 times more for females than they are for males. The model predicts the probability of being satisfied for the female is 0.52. Further, it shows that 52% of female are satisfied while 48% is not satisfied. The probability of being satisfied for males is 0.21. Further, it shows that only 21% of the male are satisfied while 79% are not satisfied. The probability of being satisfied for the female is more than twice as it is for the male.

The odds ratio of job satisfaction between the teachers qualified with a degree and trained teachers is 0.76. The model predicts the probability of being satisfied for degree holders is 0.02. Further, it shows that a fewer amount, 02% of teachers with a degree are satisfied while 98% are not satisfied. The probability of being satisfied for degree holders is less than for trained teachers. The odds ratio of job satisfaction between the teachers qualified with a diploma and trained teachers is 3.936. The probability of being satisfied for the diplomatic teacher is 0.52. Further, it shows that only 52% of diploma holders are satisfied while 48% are not satisfied. The probability of being satisfied for diploma holders is approximately twice as it is for trained teachers. Among the three categories of qualifications, the highest satisfaction is seen with the teachers with a diploma. However, the least job satisfaction is revealed among graduate teachers.

CONCLUSION

This study investigated the determinants of teachers' job satisfaction focusing on the three categories identified by De Nobile and McCormick (2006). Descriptive statistics for key characteristics of the teachers have provided important facts about the nature of the sample distribution. A distinct overview of the sample for gender, age, marital status, and education qualification was achieved through this. The majority of the teachers (65%) in the sample were female. Considering the age, the highest percentage (24%) was recorded from the 26-30 age group. Most of the teachers in the sample are married (62%) and considering their educational qualification, 46% are diploma holders.

This study uses 13 dimensions of teachers' job satisfaction which are measured on a likeret scale. The results of the principal components factor analysis extracted two uncorre-

lated factors reflecting 13 dimensions based on their eigenvalues. According to the factor loading, Factor 1 measures the extent of School Administration, Responsibility, Nature of Position, Level of school, Professional advancement, Interpersonal relationships, and Monthly Salary. Therefore factor 1 was labeled as "School Factors". Factor 2 measures the extent of Economic Resources, Social Infrastructures, Culture and Nature, Personal relationships and Security, Appreciation and Recognition, and Remoteness. Therefore, factor 2 was labeled as "Community Factors". Multiple binary logistic regression techniques were applied to identify the determinants of teachers' overall job satisfaction. The two factors, community factors, and school factors, extracted by principal components factor analysis which are reflecting 13 dimensions of job satisfaction and teachers' characteristics such as Age, Gender, Marital status, and Educational qualification were used as explanatory variables while the overall job satisfaction was used as the response variable.

Due to the assumption of multicollinearity (p-value: 0.07, 0.008), the explanatory variable, age was removed from the model. Wald statistic derived from multiple logistic regression model showed that community factors (p-value: 0.050), school factors (p-value: 0.002), and teachers' characteristics such as gender and education qualification (p-value: 0.006, 0.030) were significant in the model to explain teachers' job satisfaction. However, marital status was not significant (p-value: 0.286) and it had no direct effect on the Teachers' job satisfaction. The logistic model predicts that the odds ratio for the community factor is greater than 1 and it is positively related to Teachers' job satisfaction. Of teachers with a maximum level of the community factor, 58% are satisfied with teaching while only 5% of the teachers with a minimum level are satisfied. Similarly, the odds ratio for the school factor is greater than 1 and the School factor too is positively related to job satisfaction. The model predicts that of teachers with a maximum level of the School factor, 54% are satisfied with teaching while only 6% of the teachers with a minimum level are satisfied. Considering the gender, the Odds ratio of satisfaction for males and females is 4 indicating the odds of being satisfied are 4 times more for females than they are for males. The model predicts that 52% of female are satisfied while 48% is not satisfied. Further, it shows that only 21% of the male are satisfied while 79% are not satisfied. The odds ratio of job satisfaction between the teachers qualified with a degree and trained teachers is 0.76. The model predicts that a fewer amount, 02% of teachers with a degree are satisfied while 98% are not satisfied. The odds ratio of job satisfaction between the teachers qualified with a diploma and trained teachers is 3.936. Further, it shows that only 52% of diploma holders are satisfied while 48% are not satisfied. The probability of being satisfied for diploma holders is approximately twice as it is for trained teachers. Among the three categories of qualifications, the highest satisfaction is seen with the teachers with a diploma. However, the least job satisfaction is revealed among graduate teachers.

Hosmer and Lemeshow's goodness of fit test value is 5.941 with a p-value of 0.547, which indicated that the model adequately fits the data in this study. This study contributes to existing knowledge by fitting a model to identify determinants for job satisfaction among teachers in government schools in Sri Lanka. Mainly community factors reflecting 7 dimensions, school factors reflecting 6 dimensions, and gender and educational qualification representing teacher characteristics were the significant explanatory variables in this

study supporting the three categories identified by De Nobile and McCormick (2006) to a great extent. Spector (1997) suggests that employees tend to stay in their jobs when they are satisfied with their jobs. Teachers' job is one of the main factors which contribute to education improvement (Kefalidou et al. (2015). It is concluded that attention should be paid to community factors and school factors to enhance the teachers' job satisfaction in an attempt of improving the quality of education. This study provides imperative guidance to policy implications to improve education by addressing to determinants for teachers' job satisfaction found in this study.

REFERENCE

- Agyekum, N.N.A., Suapim, R.H. & Peprah, S.O. (2013). Determinants of job satisfaction among Ghanaian teachers. *Journal of Education and Practice*, 4(3), 43-50.
- Anastasiou, S. (2014). Factors affecting job satisfaction, stress and work performance of secondary education teachers in Epirus, NW Greece. *International Journal of Educational Management*, 8(01), 37-53. DOI: <https://doi.org/10.1504/ijmie.2014.058750>
- Aziri, B. (2011). Job satisfaction: a literature review. *Management Research and Practice*, 3(4), 77-86.
- Bogler, R. (2001). The influence of leadership style on teacher job satisfaction. *Educational Administration Quarterly*, 37(5), 662-683.
- Castillo, J. & Cano, J. (2004). Factors explaining job satisfaction among faculty. *J. Agric. Educ.*, 45(3), 65-74.
- Crossman, A. & Abou-Zaki, B. (2003). Job satisfaction and employee performance of Lebanese banking staff. *Journal of Managerial Psychology*, 18(4), 368-376. <https://doi.org/10.1108/02683940310473118>
- Davis, K. & Nestrom, J.W. (1985). *Human behavior at work: Organizational Behavior*, 7 edition, McGraw Hill, New York.
- De Nobile & McCormick (2006). Biographical differences and job satisfaction of catholic primary school staff, A paper presented at the Annual Conference of the Australian Association for Research in Education, Adelaide, November 26-30.
- Department of Examinations (2020). G.C.E (A/L) Examination - 2020 new & old syllabi performance of candidates. Research & Development (School Examinations) Branch, Department of Examinations - Sri Lanka, National Evaluation & Testing Service.
- Dogan, H. (2009). A comparative study for employee job satisfaction in aydin municipality and Nazilli Municipality. *Ege Akademik Bakis/Ege Academic Review*, 9 (2), 423-433.
- Herzberg, F., Mausner, B., & Snyderman B. (1959). *The motivation to work*. New York: Wiley.
- Herzberg, F. (1966). *Work and the nature of man*. New York: World Publishing.
- Hui, H., Hashem, S., Ismail, N. & Radzi, C. W. (2013). Principal's leadership style and teacher job satisfaction: a case study in China. *Interdisciplinary Journal of Contemporary Research in Business*, 5(4), 175-184.
- Judge, T. A., Hulin, C. H. & Dalal, R. S. (2012). Job satisfaction and job affect, In Kozlowski, S. W. J. (ed.) *The Oxford Handbook of Industrial and Organizational Psychology- Volume 01*, New York: Oxford University Press. DOI: <https://doi.org/10.1093/oxfordhb/9780199928309.013.0015>
- Kaliski, B.S. (2007). *Encyclopedia of business and finance*, Second edition, Thompson Gale, Detroit, 446.
- Kappagoda, U. W. M. R. S. (2013). The impact of the five-factor model of personality on organizational commitment of English teachers in Sri Lankan government schools. *International Journal of Physical and Social Sciences*, 3(1), 34-48.
- Kefalidou, F., Vassilakis, N. & Pitsalidis, K. (2015). Some aspects of professional empowerment to improve job satisfaction of primary school teachers. *American Journal of Educational Research*, 3(12), 1489-1495. DOI:10.12691/education-3-12-2
- Krejcie & Morgan. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(5), 603-607.
- Lundberg, C., Gudmundson, A. & Andersson, T. D. (2009). Herzberg's two-factor theory of work motivation was tested empirically on seasonal workers in hospitality and tourism. *Tourism Management*, 30(6), pp: 890-899. DOI: <https://doi.org/10.1016/j.tourman.2008.12.003>
- Miner, J. B. (2005). *Organizational behavior 1: Essential theories of motivation and leadership*, Armonk, NY: M. E. Sharpe.
- Ministry of Education (2017). School Census report 2017. Statistics Branch, Ministry of Education.
- Mahmood, A., Nudrat, S., Asdaque, M., Nawaz, A. & Haider, N. (2011). Job satisfaction of secondary school teachers: a comparative analysis of gender, urban and rural schools. *Asian Social Science*, 7(8), 203-206.
- Ngimbudzi, F. W. (2009). Job satisfaction among secondary school teachers in Tanzania: the case of Njombe District, M. Ed., University of Jyväskylä. Available from: <https://jyx.jyu.fi/dspace/bitstream/handle/123456789/25482/urn:nbn:fi:juu201010152985.pdf?sequence=1>
- Price, J.L (2001). Reflections on the determinants of voluntary turnover. *International Journal of Manpower*, 22 (7), 600-624.
- Pabla, D. M. (2012). A study of job satisfaction among teachers of professional colleges in Punjab. *Indian Journal of Research*, 1(10), 112-113.
- Rahman, M. I. (2008). Job satisfaction among public and private college teachers of Dhaka City: a comparative analysis, *SSRN*.
- Sen, K. (2008). Relationship between job satisfaction & job stress amongst teachers & managers. *Indian Journal of Industrial Relations*, 44(01), 14-23.
- Sharma, R. D. & Jyoti, J. (2006). Job satisfaction among school teachers. *IIMB Management Review*, 18(4), 349-363.
- Singh, S. K. & Tiwari, V. (2011). Relationship between motivation and job satisfaction of the white-collar employees: a case study, *Management Insight*, 7(2), 78-90.
- Spector, P. (1997). *Job satisfaction: application, assessment, causes and consequences*. Sage Publications, International educational and Professional Publisher, Thousand Oaks, London, Newdelhi.
- Sumanasena, M.L.H., Nawastheen, F.M. & Jayawardena. P.R. (2020). Job satisfaction of teachers working in the most difficult schools, with special reference to Puttalam Education Zone, Sri Lanka. *Sri Lanka Journal of Social Sciences*, 43 (1), 39-52. DOI: <https://dx.doi.org/10.4038/sljss.v43i1.7934>
- Talabi, A. S. (2016). Job satisfaction and work performance of public secondary school teachers in Akoko North West local government area of Ondo state. *Journal of Arts and Humanities*, 5(08), 39-49
- Worlu, R. & Chidozie, F. (2012). The validity of Herzberg's dual-factor theory on job satisfaction of political marketers. *African Research Review*, 6(1), 39-50.
- DOI: <https://doi.org/10.4314/afrrev.v6i1.4>
- Yusuf, F. A., Olufunke, Y. R. & Valentine, M. D. (2015). Causes and impact of stress on teachers' productivity as expressed by primary school teachers in Nigeria. *Creative Education*, 6, 1937-1942. DOI: <https://doi.org/10.4236/ce.2015.618199>