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Exploratory Factor Analysis and Variables Validity of Job Satisfaction on Head Teachers Job Performance in Palestine

Mohamad Zulkifli Bin Abdul Rahim¹, Hadeel Adel Hasan Abuayyash¹, Izzat Bin Ismail¹, Abdul Malek Bin A. Tambi²

¹Department of Management Science Faculty of Business and Management Universiti Sultan Zainal Abidin, 21300, Kuala Nerus, Terengganu, Malaysia, ²Alfa College University Deputy Vice Chancellor Office, Subang Square, Corporate Tower, 47500 Subang Jaya, Selangor Email: hadeelayyash2017@gmail.com Corresponding Author’s Email: zulrahim@unisza.edu.my

Abstract
Good governance is the heart of effective head teacher performance. Conversely, ineffective head teacher performance management may be a symptom of ineffective governance. Effective oversight of the head teacher is the most important part played by the governing body in the overall governance of the school. The aim of this paper was to the use of Exploratory factor Analysis in extracting factors of Job Satisfaction and the factors of job performance among Palestinian headteachers primary school. Hence, this study intends to explore and determine the dimensionality of items measuring the job satisfaction and performance variables. A quantitative method is commonly used with survey and is considered the mainstay of the research for collecting data. The study was based on a pilot study conducted of a 100 headteachers respondents. The study also established content validity through a series of expert review, pre-test before running the EFA. Alpha coefficient (Cronbach’s alpha) provided a reliable measure of internal consistency in pilot testing.

Keywords: Job Satisfaction, Job Performance, Headteacher, Exploratory Factor Analysis

Introduction
Development school is one of the Ministries of Education priorities with considering that school is the main part of Educational institutions (Majed et al., 2016). The education sector in developing countries facing real challenges. They are not in a position to offer good quality education (Al-hazmi, 2013). Primary education, it is viewed as the most important corner in the education process and the first stage of obligatory schooling (Alawneh & Mazoz, 2011). In Palestine, the education system has passed through some crucial stages, as well as a distinct political transition. The Integrated Learning Project was one of a series of educational reforms introduced in Palestinian primary schools by the newly established Palestinian National Authority (PNA), which put health and education under its administration (Al-Ramahi & Davies, 2012). However, good governance is the heart of effective head teacher performance.
According to (Hamail, 2018) headteachers satisfaction is one of the major things that bring a satisfactory in the whole educational institutions, which in turn affects the whole school and the student's sake, therefore enhancing academic process (Volkwein & Parmley, 2000). However, there are limited studies that have investigated the head teachers job satisfaction particularly in the context of Palestine (Mansoor, 2010). Factors such as a lack of salaries, affect negatively on their satisfaction and constantly among their performance (Abd-Alqader, 2013) Job satisfaction (JTS) refers to the extent of one’s satisfaction with work. A satisfied employee is bound to feel happy, self-motivated, and content with his or her current responsibilities. Job satisfaction (JTS) is also related to stability and work-life balance. Therefore, it is a necessity to investigate and address the issue of school head teachers job satisfaction (Al-Zaidi, 2008). Researchers (Al-hazmi, 2013; Alzaidi, 2008) pointed out that lack of cooperation and inconsistent decisions such as constraints, regulations, and lack of delegation authority to perform some tasks contribute to job dissatisfaction (Al-hazmi, 2013), eventually, their performance will be weak (Khoury, 2009). Thus, the objective of this study is to determine and analyse the factors which might affect the head teachers primary school job satisfaction and performance factors.

**Literature Review**

Numerous researchers have shown the relationship between job satisfaction and job performance. Job satisfaction is the general attitude that people have about their jobs (Abbas, 2014; Arifin, 2014; Farooqui, 2011; Dugguh, 2014). It can affect the satisfaction or dissatisfaction of employees if the job factors are considered positive or otherwise (Alhazmi, 2013). Despite the theoretical underpinnings, there is a lack of empirical investigation within school settings and contexts (Watson, 2013), and little is known about how the relationship between teachers and head teachers emerges (Spicer, 2012). In a study by Alhazmi (2013), concludes that female secondary school headteachers overall attitudes to their job were negative, were the factors of dissatisfaction linked to educational administration by the education authorities outside the school, including lack of cooperation and inconsistent decisions. A study concluded by (Mehrad, 2014) revealed that job satisfaction is one of the main factors in education that should be considered by managers and improve the needs of academic units toward work and its climates conditions, and one of the factors that affect positively is income. Additionally, Dugguh (2014), showed positive impacts of job satisfaction towards work performance. He recommended that organisation should use these factors in their job to make their employees satisfied and happy.

**The Objective**

This study intends to explore and determine the dimensionality of items measuring the job satisfaction and performance variables.

**Method**

**Sample**

The researcher proceeded the sample for this study at primary school head teachers in city of Hebron in Palestine. Overall, the researcher distributed the survey to 100 head teachers as a minimum number of sample size for conducting a pilot study to run the EFA as recommended by (Awang, 2012). Furthermore, the researcher assured of confidentiality and anonymity.
Research Instrument
The questionnaire was designed based on previous literature. Items were adopted, customize and modified by the researcher to suit for the study. For job satisfaction variable ten measurements items were adapted from (Al-Zaidi, 2008; Torlak & Kuzey, 2019) and 14 items for work performance variable were adapted and customized from (David, 2006). As a consequence, a pre-test was conducted. The questionnaire was given for expert reviewer in the field of study when designing the questionnaire in order to ensure that the questionnaire is valid and reliable, and suit for this study (Muda et al., 2017). The instruments employed a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). Likert scale is a measure of attitude designed to allow respondents to indicate how strongly they agree or disagree with carefully statements. This Likert scale was selected because it takes less time and easy to answer (Brown, 2000). Whereby they indicated the extent they agree or disagree ranging from these variable and ratings 1 for “strongly disagree” to 7 for “strongly agree. The data was first coded for the different variables on the instruments before the initial input of the data into SPSS Version 19. Coding of the data is essential to ease the analysis. The variables or items are abbreviated according to the variable name or variable name in SPSS and equally assigned numbers to easily identify the response for each respondent (Sekaran & Bougie, 2010).

Findings & Discussion
Exploratory Factor Analysis for Job Satisfaction
Exploratory factor analysis was performed on all subsets of the sample by using IBM-SPSS version 25.0 with the Principal Component Analysis (PCA) as the extraction method and the rotation method used was Varimax (Variation Maximization). In the EFA, the extraction involves grouping the items into possible component (s). The components having Eigenvalue closer to 1 or mostly above 1 are preferred. The results in table 1 showed that the data is adequate in order to proceed further with the data reduction in EFA, while the results indicated that the measure of sampling adequacy by Kaiser–Meyer–Olkin (KMO) value is excellent for all variables since it exceeded the required value of (0.60) Bandalos and Finney (2001); Awang (2012); Sharma (1996) and it indicated that the items were interrelated and they share common factors as recommended by (Coakes et al., 2006). Furthermore, the Bartletts’ Test of Sphericity is significant (P-Value < 0.001) as suggested by (Hair et al., 2014,b).

Table 1
KMO and Bartlett’s Test

| Variable            | KMO and Bartlett’s Test                       |
|---------------------|-----------------------------------------------|
| Job satisfaction    | Kaiser-Meyer-Olkin Measure of sampling Adequacy | 0.750  |
|                     | Bartlett’s Test of Sphericity                 | 740.575 |
|                     | Df                                             | 45     |
|                     | Sig.                                           | .000   |
| Performance         | Kaiser-Meyer-Olkin Measure (KMO)               | .738   |
|                     | Bartlett’s Test of Sphericity                 | 693.999 |
|                     | Df                                             | 91     |
|                     | Sig.                                           | .000   |
The results in the table 2 below shows that there are the three components emerged from EFA procedure made on job satisfaction variable, based on the computed eigenvalue greater than 1.0. The total variance explained for measuring this variable is 75.940. The cumulative variance is acceptable since it is exceed 60% (Bahkia et al., 2019). The eigenvalues ranges between 5.106 & 1.037 The table also shows that there is four components emerged from EFA procedure made on performance variable, based on eigenvalue greater than 10. The total variance explained for measuring this variable is 70.526, it is acceptable since it exceed 60 % were the eigenvalues ranges between  1.322 & 5.275. 

Table 2  
The Total Variance For all the Variables  

| code | variable | component | initial Eigen values | Rotation sums of squared values |
|------|----------|-----------|----------------------|---------------------------------|
| JS   | Job Satisfaction | 1         | 5.106                | 5.106                            |
|      |          | 2         | 1.451                | 1.451                            |
|      |          | 3         | 1.037                | 1.037                            |
| WP   | Work Performance   | 1         | 5.275                | 5.275                            |
|      |          | 2         | 1.793                | 1.793                            |
|      |          | 3         | 1.483                | 1.483                            |
|      |          | 4         | 1.322                | 1.322                            |

Extraction Method : Principal Component Analysis  
Rotation Method : Varimax with Kaiser Normalization  

The results in the below table 3 shows the results of Rotated Component Matrix that was conducted for the study. The factor loading of the all items belonging to Job Satisfaction variable were all exceed ( 0.60 ) as recommended by Hair et al (2006); Awang (2012) that the item with factor loading below 0.6 will not be accepted and will excluded from further analysis ,and the factor loading for items were ranges from 0.693 to 0.860, except one item JS6 has been deleted from further steps factor analysis due to low factor loading < ( 0.6 ). The items for job satisfaction variable JS4, JS2, JS3, JS1 were grouped under component number one “Salary”, while JS8, JS9, JS10 were grouped under component number two labelled by “Authority and Support”, and JS5,JS7 items were grouped under component number three “Morale”. Similarly, the Factor loading of all items belonging to work performance variable were all exceed (0.60) and were ranges from 0.643 to 0.842, except one item WP15 get factor loading less than (0.60) has been deleted from further analysis (Awang, 2012). Thus, two items would not be used to measure their variables in the field study. Furthermore, the first component for performance variable, have five items JP19, JP20, JP18, JP17, JP22 were grouped under “quality & managerial ability”. While the second component have 3 items JP21, JP24, JP13 were grouped under “quantity & Job Proficiency “, and the third component have 2 items were grouped under “professional development”. The Forth component have 2 items were grouped under “Self–Appraisal & Job related Skill “ and JP15 were excluded from further analysis. Instead of dealing with 24 items, it was reduced to 22 items, two items were excluded as mentioned above from further analysis.
### Table 3
*Rotated Components Matrix’s*

| Variable     | code | Item                                                                 | COM 1 | COM 2 | COM 3 | COM 4 |
|--------------|------|----------------------------------------------------------------------|-------|-------|-------|-------|
| **Job satisfaction** |      | I feel satisfied with my chances for salary increment                | .883  |       |       |       |
|              | JTS2 | My salary as a head teacher is compatible with my duties            | .860  |       |       |       |
|              | JTS3 | I feel appreciated by the Ministry of Education when I think about my salary | .824  |       |       |       |
|              | JTS4 | My salary as a head teacher is different from other teachers working with me | .796  |       |       |       |
|              | JTS6 | The type of work I do is close to the job description               | [DELETED] |       |       |       |
|              | JTS8 | I have the authority to perform many tasks                          | .824  |       |       |       |
|              | JTS9 | I am satisfied with the work I do                                   | .796  |       |       |       |
|              | JTS1 | My job is enjoyable                                                | .779  |       |       |       |
|              | JTS5 | I am satisfied with my career as a head teacher                     | .725  |       |       |       |
|              | JTS7 | I am satisfied with my current job                                  | .693  |       |       |       |
| **Job performance** |      | I am doing each step of my work carefully                           | .806  |       |       |       |
|              | JP19 | I keep on enhancing the quality of the educational process          | .733  |       |       |       |
|              | JP20 | I am using resources in a cost-effective manner                     | .710  |       |       |       |
|              | JP18 | I appraise myself in terms of my ability to achieve my goals       | .662  |       |       |       |
|              | JP17 | I always perform tasks according to deadlines under any condition  | .643  |       |       |       |
|              | JP22 | I attend workshops and lectures to improve my performance           | .842  |       |       |       |
|              | JP21 | Always come up with new and practical ideas to enhance performance  | .832  |       |       |       |
|              | JP13 | I know how to set right priorities in my work                       | .750  |       |       |       |
|              | JP15 | I perform the tasks at higher level than my colleagues              | [DELETED] |       |       |       |
|              | JP14 | My performance always meets the expectations of the director of education | .778  |       |       |       |
|              | JP11 | I have the ability to perform essential tasks                       | .727  |       |       |       |
|              | JP12 | I am energetic and active in dealing with my work                   | .696  |       |       |       |
Reliability Test
Reliability refers to the extent to which a scale produces consistent result, if the measurements are repeated a number of items (Hair, 2010) and how far the relationship exists between indicators in the variable (Hair, 2010). Internal reliability can be reviewed using the Cronbach’s Alpha value (Awang, 2014). As one of the pioneer researchers who discussed reliability, Nunnally (1978) recommended that Cronbach’s Alpha values of more than 0.70 are acceptable.

Table 4
| Variable          | No of items | Cronbach Alpha |
|-------------------|-------------|----------------|
| Job satisfaction  | 10          | 0.860          |
| Job performance   | 14          | 0.802          |

Table 4 shows the Cronbach’s Alpha value for all the variables, and they have been exceeded (0.6) for all variables as recommended by (Hair et al., 2014; Awang, 2012). This reliability analysis indicated that the three variables involved in this study had good values for the reliability coefficient and were acceptable for further analysis.

Conclusion
In conclusion, the EFA assesses the dimensionality, validity and reliability of the job satisfaction and job performance measures evaluated by head teachers. As a result, there are twenty two items remaining for the final measurement framework, nine items under job satisfaction, and thirteen items remaining under job performance variable. The finding of this study offers a modification and new measures for the variable of job satisfaction and job performance based on headteachers evaluation. It is hoped that further analysis will contribute to sustainable development of the measurement items in education sector.

Theoretically, the contribution of this study lies in its ability to extend the insights on Two factor theory on the relationship between job satisfaction and job performance in the context of education. The outcome of this study is expected would further enhance new discoveries on the association between job satisfaction and job performance in education sectors worldwide.
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