Multilevel Analysis on the Association of Job Satisfaction and Organization Commitment with Performance of Family Planning Counsellor in Yogyakarta

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ABSTRACT

Background: Performance is an important thing in an organization’s efforts to achieve the goals. To evaluate employees objectively, a supervisor must be able to measure their performance level. There are many job characteristics that employees consider, but a group of job characteristics tends to be collectively evaluated in the same way. This study aimed to analyze the effect of job satisfaction and organizational commitment on the employee performance of the Family Planning Counselors in Yogyakarta

Subjects and Method: This study used a cross-sectional study. This study was conducted in the office of Family Planning Field Officer (PKB), Yogyakarta, Central Java, from January to February, 2020. There were 200 employees as the sample of this study. The sample was collected using simple random sampling. The dependent variable was the performance of PKB employees. The independent variables were job satisfaction and organizational commitment. The data were collected using questionnaires. The data were analyzed using multilevel analysis with Stata 13.

Results: The performance of PKB employees increased with poor job satisfaction (b=2.36; 95%CI=1.49 to 3.22; p<0.001) and good organizational commitment (b=1.68; 95%CI=0.89 to 2.47; p<0.001). PKB office had a contextual effect on employee performance with ICC=10.75%.

Conclusion: Job performance is affected by job satisfaction and organizational commitment. PKB Office has a strong contextual effect on job performance.

Keywords: employee performance, job satisfaction, organizational commitment


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BACKGROUND

Performance is an important thing in an organization’s efforts to achieve its goals so that various activities must be carried out by the organization to improve it. One of the ways to do this is through performance appraisal. Bangun (2012) stated that performance appraisal was a formal assessment of how good employees are doing their job. To be able to evaluate employees objectively, a supervisor must be able to measure their performance level. Performance measurement can be used as a standard measure used by employees in directing their efforts through a certain set of priorities.

Siagian (2003) stated that job satisfaction was a person’s perspective, both positive and negative about their job. Job satisfaction is a generalization of attitudes towards a job based on various aspects of the job. There are
many job characteristics that employees consider, but a group of job characteristics tends to collectively be evaluated in the same way.

Organizational commitment is defined as the relative strength of the identification of individuals with involvement in a particular organization. If the concept of organizational commitment is used as a predictor of employee retention, it becomes the focus of managers in general departments and human resources in many organizations. The main responsibility of a human resource (HR) manager is to understand the factors that make an employee commit and use that knowledge to increase employee retention and productivity. Organizational commitment describes the status of employees' commitment to the organization and the identification of employees with organizational values and goals (Osiokalii et al., 2015).

**SUBJECTS AND METHOD**

1. **Study Design**
This study used an analytical observational method with a cross-sectional approach. This study was carried out in the office of Family Planning Field Officer (PKB) in D.I.Yogyakarta from January to February 2020.

2. **Population and Sample**
The population of this study was 200 PKB employees at D.I.Yogyakarta as the subjects of the study. This study used simple random sampling.

3. **Study Variables**
The dependent variable was employee performance. The independent variables were job satisfaction and organizational commitment.

4. **Operational Definition of Variables**
   - **Employee performance** was the achievement result of efforts that have been made. It could be measured by certain indicators such as stress, work environment, workload, and salary. The measuring instrument was questionnaires.
   - The data scale was categorical data. The data was converted into dichotomous data to facilitate the analysis.
   - **Job satisfaction** was measured by a series of happy feelings and emotions of employees, related to several aspects of their work, such as co-workers, income received, leader, job, and promotional opportunities provided by the company. The measuring instrument was questionnaires. The data scale was continuous data. The data was converted into dichotomous data to facilitate the analysis.
   - **Organizational commitment** was an attitude that reflected employee loyalty to the organization. It was a continuous process in which organizational members expressed their concern for the organization, organizational success, and continuous progress. The measuring instrument was questionnaires. The data scale was continuous data. The data was converted into dichotomous data to facilitate the analysis.

5. **Data Analysis**
Univariate analysis was used to describe each dependent and independent variable. The data were classified based on the type of data. The data were put into a frequency distribution table. Bivariate analysis was used to determine the relationship between job satisfaction and organizational commitment and employee performance as measured by the Chi-square test. The multilevel analysis explained the effect of job satisfaction and organizational commitment on employee performance at the office level of Family Planning Field Officer (PKB). The univariate, bivariate, and multilevel analysis used the Stata 13 program.

6. **Research Ethic**
Research ethics included informed consent, anonymity, confidentiality, and ethical clearance. The ethical clearance in this study came from the Health Research Ethics Committee of Dr. Moewardi Hospital, Surakarta, No. 14-65/XI/HREC/2019.
RESULTS

1. Sample Characteristics
Based on table 1, 196 respondents (98.00%) aged <35 years old. 193 respondents (96.50%) were married. Most of the sexes were male or 101 people (50.50%).

2. Univariate analysis
Based on table 2, the measurement of the job satisfaction variable showed the mean and SD values by 36±7.41 with the lowest value by 21 and the highest value by 72. The organizational commitment variable showed the mean and SD values by 24±6.55 with the lowest value by 18 and the highest value by 48.

Table 1. The characteristics of the study subjects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Criteria</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>&lt; 35 years</td>
<td>196</td>
<td>98.00</td>
</tr>
<tr>
<td></td>
<td>≥ 35 years</td>
<td>4</td>
<td>2.00</td>
</tr>
<tr>
<td>Marital status</td>
<td>Single</td>
<td>7</td>
<td>3.50</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>193</td>
<td>96.50</td>
</tr>
<tr>
<td>Sex</td>
<td>Male</td>
<td>101</td>
<td>50.50</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>99</td>
<td>49.50</td>
</tr>
</tbody>
</table>

Table 2. Univariate Analysis (continuous data)

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job satisfaction</td>
<td>200</td>
<td>36.40</td>
<td>7.41</td>
<td>21</td>
<td>72</td>
</tr>
<tr>
<td>Organizational commitment</td>
<td>200</td>
<td>24.02</td>
<td>6.55</td>
<td>18</td>
<td>48</td>
</tr>
<tr>
<td>Employee performance</td>
<td>200</td>
<td>40.02</td>
<td>8.67</td>
<td>32</td>
<td>80</td>
</tr>
</tbody>
</table>

Table 3. Univariate Analysis (data dikotomi)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Criteria</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job satisfaction</td>
<td>Low</td>
<td>71</td>
<td>35.50</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>129</td>
<td>64.50</td>
</tr>
<tr>
<td>Organizational commitment</td>
<td>Weak</td>
<td>109</td>
<td>54.50</td>
</tr>
<tr>
<td></td>
<td>Strong</td>
<td>91</td>
<td>45.50</td>
</tr>
<tr>
<td>Employee performance</td>
<td>Poor</td>
<td>86</td>
<td>43.00</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>114</td>
<td>57.00</td>
</tr>
</tbody>
</table>

3. The result of bivariate analysis
The bivariate analysis aimed to explain the relationship between one independent variable (job satisfaction and organizational commitment) and one dependent variable (employee performance). The results of the bivariate analysis can be seen in Table 4.

There was an effect of job satisfaction on the performance of the PKB employees. Employees with high job satisfaction (72.09%) had better performance than those with low job satisfaction. Employees with high job satisfaction were 8.84 times more likely to perform better than low job satisfaction.
There was an effect of organizational commitment on the performance of PKB employees. Employees with strong organizational commitment (71.43%) had better performance than those with weak organizational commitment. Employees with strong organizational commitment were 4.84 times more likely to perform better than weak organizational commitment.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Employee performance</th>
<th>Total</th>
<th>OR</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Good</td>
<td>%</td>
<td>Poor</td>
<td>%</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>70.42</td>
<td>21</td>
<td>29.58</td>
<td>71</td>
</tr>
<tr>
<td>Low</td>
<td>37.91</td>
<td>93</td>
<td>72.09</td>
<td>129</td>
</tr>
<tr>
<td>Organizational commitment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weak</td>
<td>55.05</td>
<td>49</td>
<td>44.95</td>
<td>109</td>
</tr>
<tr>
<td>Strong</td>
<td>28.57</td>
<td>65</td>
<td>71.43</td>
<td>91</td>
</tr>
</tbody>
</table>

**Table 5. The analysis of the multiple logistic regression on several variables with employee performance**

<table>
<thead>
<tr>
<th>Fixed Effect</th>
<th>Regression coefficient</th>
<th>CI 95%</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job satisfaction (high)</td>
<td>2.36</td>
<td>1.49</td>
<td>3.22</td>
</tr>
<tr>
<td>Organizational commitment (strong)</td>
<td>1.68</td>
<td>0.89</td>
<td>2.47</td>
</tr>
</tbody>
</table>

**Random Effect**

PKB Office

Log likelihood=-108.22

LR test vs. logistic regression p= 0.142

chi2 (01)= 1.15

ICC= 10.75%

4. The result of multilevel analysis

Multivariate analysis used multilevel multiple logistic regression methods and analyzed using Stata 13. Table 5 shows that PKB employee performance was affected by job satisfaction and organizational commitment. PKB employee performance increased with poor good job satisfaction (b=-2.36; 95% CI=1.49 to 3.22; p <0.001) and good organizational commitment (b= 1.68; 95%CI=0.89 to 2.47; p <0.001). PKB office had a contextual effect on employee performance with ICC=10.75%.

DISCUSSION

1. The Effect of Job Satisfaction on Employee Performance

The results of this study indicated that there was a positive effect of job satisfaction (b=-2.36; 95% CI= 1.49 to 3.22; p <0.001) on employee performance. The employees with high job satisfaction had 2.36 units higher logodd of performing well than those with low job satisfaction.

According to Soegihartono (2012), employees who were satisfied with their work would have a positive effect on individual performance achievement. This finding is in...
Organizational commitment was an attitude that reflected employee loyalty to the organization. Attitude was a general evaluation made by humans, other people, objects, or problems which were certain regularities in terms of feelings, thoughts, and actions (Kurniavie et al., 2020). An individual's commitment to the profession and organization where she/he worked was a very important issue. Empirically, Kertabudi and Aripin (2015) explained the effect of organizational commitment and job satisfaction on job performance. It showed that increasing job satisfaction in the organization was greatly important.

Several organizations dared to include a commitment as an element as one of the requirements for holding a position offered in job vacancies. It showed the importance of commitment in the world of the carrier. Commitment to work in a company was inseparable from the form of a relationship between the employee and the job or profession where the employee worked to achieve the business goals desired by the company (Eliyana et al., 2019).

Organizational commitment mediated the effect of satisfaction on working conditions, salary, supervision, and security on both affective and behavioral tendencies toward change. In addition, continuance commitment (the low perceived alternative) mediated the effect of satisfaction with the fees on cognitive attitudes toward change. The results showed that cognitive attitude on change increase with increased satisfaction with salaries, while affective attitude towards change increased with increasing satisfaction with promotion (Yousef, 2016).

3. PKB office on employee performance
The contextual of PKB office had an Intra-Class Correlation (ICC) result by 10.75%. This value was an indicator that the PKB office had a contextual effect on employee perfor-
mance variations. The results of the ICC were greater than the rule of thumb of multilevel analysis. Therefore, the strata that described the PKB offices needed attention.

This result is in line with a study conducted by Gilmore et al. (2016) that one of the factors that contribute to the health workers performance was the contextual effect of the environment that allowed employees to perform their duties effectively. The differences in each PKB office in this study were caused by various factors, including work culture, work stress, work facilities, and so on.

**AUTHOR CONTRIBUTION**
Ikhtiarisca Olifia Mufidatun as the main researcher who played a role in coordinating the study, conducting all stages of the study, and completing the study paper. Didik Gunawan Tamtomo played a role in developing the study ideas, design, and hypotheses. Bhisma Murti played a role in compiling the theoretical framework, processing the data, representing the results of the analysis, and preparing the papers.

**CONFLICT OF INTEREST**
The authors declare that there is no conflict of interest in the publication of this article.

**FUNDING AND SPONSORSHIP**
This study used personal funds from the main researcher.

**ACKNOWLEDGEMENT**
The researchers would like to thank the PKB of the D.I. Yogyakarta Province who allowed to carry out this study. The researchers also would like to thank to all PKB employees who have been willing and cooperative to become the respondents of this study.

**REFERENCE**