

## Person Environment Fit and Adaptive Performance among Nurses in Malaysian Public Hospitals

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### Abstract

The performance of public hospital employees, especially nurses, has become a major concern nowadays. Therefore, nurse's ability to cope and respond fast to excel in the workplace will boost their performance while solving patients' problems and safe people's life. As a result, the aim of this research is to investigate the factors that lead to enhance nurses' adaptive performance by study on relationship between person environment (PE) fit, work engagement (WE), and adaptive performance (AP). The researchers also look into the role of WE as a potential mediator. PE fit was assessed in three dimensions in this study: person-group (PG) fit, person-job (PJ) fit, and person-supervisor (PS) fit. Furthermore, vigor, determination, and absorption were used as mediators of WE, while AP was assessed as unidimensional in this analysis. A total of 638 questionnaires were distributed to nurses in the Emergency Departments of twelve Malaysian public hospitals, with 430 of them being evaluated using Partial Least Squares Structural Equation Modeling (PLS-SEM). The methodological findings of this analysis suggest that PE fit measurements (PG fit and PJ fit) are related to AP while there is a positive significant relationship between PJ and PS fit (for PE fit) and WE. The finding also affirms the presence of a substantial positive interaction between WE and AP. In addition, WE also mediates the relationship between three dimensions of PE fit (PJ fit, PS fit, and AP fit) and AP. According to the results, public hospital administrators should place a greater emphasis on the person fit of nurses in order to increase their work performance and adaptability in their challenging working space. Finally,

this study discusses the theoretical and functional contributions, as well as shortcomings and possible research suggestions.

**Keywords:** Person-Environment Fit, Adaptive Performance, Work Engagement, Nurses, Public Hospital.

### **Introduction**

Performance of the public workforce in today's challenging environment is one of the important indicators to achieve health care service's quality standard (Shahidan, Hamid, & Ahmad, 2018). However, lack of improvement has been seen in the public hospital's employees' performance due to the inability of employees to deal with emergency situations (Shahidan, 2019) specifically nurses. Supported by the finding by Nastasa, & Farcas (2015), doctors and nurses who fail to adapt fast in the hospitals will have an affect towards their adaptive performance. Additionally, lack of adaptive performance has been observed among nurses who tackle emergency situations due to hardly any change and adaptation to uncertainty and environmental changes (Jundt et al., 2015) specifically in the Malaysian context.

Consistent with the above discussion, as written in a nursing report on the reality of Malaysian nurses in Malaysia public hospitals, "Changes are taking place in nursing practice. However, nurses are hardly planning for such change" (Development of Nursing Education in Malaysia-towards the year, 2018, p.25). The report clearly shows that failure to cope with the changes and act fast in uncertainty at the workplace is an indicator of weak adaptive performance, which may further have resulted in delay in the time of work process (Othman, & Nasurdin, 2019). Plausibly, according to Dr. Ravindran Naidu, president of Malaysian Medical Association (MMA), a massive media report has revealed the dissatisfaction among patients towards service delivery provided by Malaysia public hospitals, specifically regarding waiting time issue.

Consistently, an average number of 7000 complaints targeted to Ministry of Health (MOH) was based on poor services or communication skills among employees specifically nurses, long waiting time for treatment and insufficient equipment in Malaysia public hospitals (Bhatti, Alshagawi, & Juhari, 2018). However, nurses' performance remains questionable, especially in public hospitals. Moreover, as stated in the report published by Malaysia Public Complaint Bureau (PCB), the highest complaints received from the clients were based on the dissatisfaction of the public sector's staff performance, especially the healthcare sector which is at the 2nd ranking (PCB,2017). Therefore, this study focuses on the relationship between PE fit and AP with moderating effect of WE to investigate the nurses' adaptability in critical working environment.

This research aims to achieve the following objectives:

- To investigate the relationship between Person Environment fit's dimensions (Person Group fit, Person Job fit and Person Supervisor fit) and Adaptive Performance among nurses in Malaysia public hospitals.
- To examine the relationship between Person Environment fit's dimensions (Person Group fit, Person Job fit and Person Supervisor fit) and Work Engagement among nurses in Malaysia public hospitals.
- To investigate the relationship between Work Engagement and Adaptive

- Performance among nurses in Malaysia public hospitals.
- To determine the mediating role of Work Engagement on the relationship between Person Environment fit's dimensions (Person Group fit, Person Job fit and Person Supervisor fit) and Adaptive Performance.

### **Literature Review**

#### *Person-Group (PG) Fit and Adaptive Performance (AP)*

Besides, there is a positive co-relation among team workers and performance, therefore, it can be assumed that PG fit may relates to employee performance in term of their adaptive performance in current study perspective. Moreover, a person who share similar values may give better performance because they can predict coworker's behavior (Amarneh, & Muthuveloo, 2020). Additionally, research denotes that PG fit has positive correlation with Adaptive Performance (Park, Lim, Kim, & Kang, 2020) as well as with adaptive performance because it is also under Adaptive Performance domain. Thus, based on the past literature, following hypothesis has been developed.

Hypothesis 1: There is a positive significant relationship between PG fit and Adaptive Performance

#### *Person-Job (PJ) Fit and Adaptive Performance (AP)*

Moreover, it seems that PJ fit is a not important antecedents of Adaptive Performance (Abdullah, Rashid, Lukman, & Annuar, 2018). This aspect only focuses on significant correlation between PJ fit and Adaptive Performance, however, theoretical arguments and results suggested that few psychological and motivational factors mediates the relationship between PJ fit and Adaptive Performance. Thus, this study tries to use work engagement as a mediator to explain these inconsistent results of past studies.

The concept of adaptive performance in current study's perspective is similar when nurse's KSAs meet the job requirement and they achieve satisfaction in their job. Which, later will further resulted to their excellent performance even when they are working in critical and uncertain situation like emergency department. Similarly, employees with adequate skills and abilities match the job's requirements and anticipated to accomplish their jobs effectively (Chong, Falahat, & Lee, 2020). Therefore, it is assumed that PJ fit have a significant relationship to adaptive performance. The hypothesis has been developed as per below.

Hypothesis 2: There is a positive and significant relationship between PJ fit and Adaptive Performance

#### *Person-Supervisor (PS) Fit and Adaptive Performance (AP)*

Interestingly, a study by Mohamed, Tuah, & Othman, (2020) highlighted that PS fit become an important fit dimension for Adaptive Performance because of the hierarchal aspect lies particularly in Asian countries. The reason behind is; employees are expected to obey their supervisors for their own benefits (Geukes, Nestler, Hutteman, Küfner, & Back, 2017) of promotion and future career planning. In current study perspective, nurses working in public hospitals are considered as "blue collar" workers and found involved in certain regulation at their work. For instance, if something happens during their work then they cannot report

directly to their superior, which means they have to follow the level of hierarchy starting from their supervisor.

In line with discussion, it is proved that the relationship between employee and their supervisors played an important role to enhance performance indicator because employee's work got evaluated by their supervisors. Therefore, maintaining a good relationship and having same consensus will make their work easy. As this study focus on DA fit to measure PS fit, thus the ability of employee to fulfill and meet the supervisor's demand is the indicator of this dimension. For instance; having a good relationship with supervisor is a main predictor of Adaptive Performance because employee always need strong support and guidance from their supervisor to deal with any difficulty or challenging situation. Therefore, based on the above discussion, the following hypothesis has been developed.

Hypothesis 3: There is a positive and significant relationship between PS fit and Adaptive Performance.

### **Mediating Effect Work Engagement (WE)**

Further, in current study, fit between the person and work environment is measured in term of DA fit. It implies that when employees perceived with PE Fit dimensions (job, group, and supervisor) they can demonstrate a high level of work engagement because requirements at work is well matched. For instance, employees who fit with their job's requirements are highly skilled in performing their job, one of the reasons is; when a person fit with their supervisor can collaborate well with less conflict because they can meet with his/her supervisor requirements.

Thus, it results in increase of work engagement level because each aspect of working requirements (job, group and supervisor's requirements) are well matched with KSAs that help them to increase their performance.

In addition, supported by the concept proposed by Lewin's (1951) theory and Social Exchange Theory, it is hypothesized that PE fit dimensions may have significant impact to work engagement. Therefore, it is strongly believed that these two variables have significant relationship. Thus, based on the above discussion and past literature, the following hypothesis has been developed to examine the relationship between PE fit dimensions and work engagement.

Hypothesis 4: There is a positive significant relationship between PG fit and Work Engagement

Hypothesis 5: There is a positive significant relationship between PJ fit and Work Engagement

Hypothesis 6: There is a positive significant relationship between PS fit and Work Engagement

### ***Work Engagement (WE) and Adaptive Performance (AP)***

Work engagement concept is differing from other traditional attitudes because it is aligned with motivation's aspect, which strongly correlated with both task and contextual performance (Dousin, Collins, & Kaur Kler, 2019). This is due to logic that engaged employees undergo a high level of connection to their tasks even in any difficult situation like trauma

and emergency, thus will proceed to high levels of performance including adaptive performance.

In addition, Geukes, et al, (2017) introduced an integration model of performance that combines many performance concepts and relates behavior to the requirements of the task environment especially in uncertainty and unpredictable situations. Furthermore, this model recognizes two work environment's features; uncertainty and interdependence which effect certain behaviors to contribute in overall performance. Therefore, based on the model individuals will perform based on the high or low level of uncertainty. Usually, employees perform their tasks well with low uncertainty because they used to do it as a routine work, whereas, when there is high level of uncertainty, they be inclined to low level of performance due to new changes occur in their task and effect their performance. Hence, based on the above discussion, the study hypothesized the relationship between work engagement and adaptive performance as follows:

Hypothesis 7: There is a positive significant relationship between Work Engagement and Adaptive Performance.

### **Research Methodology**

The quantitative approach along with the survey questionnaire method was appropriate for a study in which a significant population number was examined after which general conclusions would be made for the whole population. For the collection of data, the survey method was used and statistical techniques were utilized for data analysis. Furthermore, descriptive research is carried out through two main methods, namely, cross sectional and longitudinal. The former collects information from a sample population at one point in time while the latter gathers the same sample population units over a period of time (Malhotra, & Galletta, 1999). Additionally, the cross-sectional design also refers to a sample survey where individuals selected are asked to respond to a set of standardized and structured questions concerning the way they think and what they feel and do (Hair et al., 2003). A cross-sectional study rather than a longitudinal one was suitable to be utilized in the present study because of the time limitations.

### **Research Framework**

Based on the literature review discussed previously and suggestions by several studies, this study has developed a research framework. Person Environment Fit has been included as independent variables in current study. Other than that, Work Engagement acted as a mediating variable and Adaptive Performance is a dependent variable of current study. In short, the study variables build a relationship and converted into the theoretical framework to obtain the results according to the current study objectives. The research framework for current study is shows in Figure 1 below.

**Person Environment Fit**

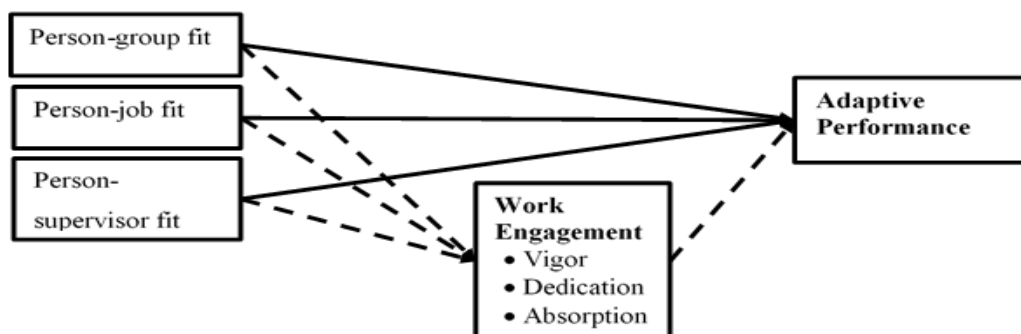


Figure 1: Research Framework

**Population and Sampling Technique**

Selecting the right sample is very vital part since it is an impossible thing to collect data in each part of the whole population. This is because of very costly, time constraint and inadequate personnel to assist in data collection procedure. Other than that, the selection of the respondent's is due to several reasons. Firstly, the sample was acceptable as the nature of a nurse's job was involved directly with emergency and uncertainty situation as it fit the concept of adaptive performance itself; critical unit's employee. Secondly, nurses are the key person that responsible and have direct contact with patients and faced with uncertainty happens in their workplace (emergency department). Unlike other health professions like doctors and matrons, nurses will directly have to treat and serve the patients with regards to the doctor's advice and matron's guidance. Thirdly, the reason why nurses in public hospitals have been selected for the current study because there are a lot of complaints regarding their performance. Critically, with the passage of time, it has been reported that the Ministry of Health ranked as top 3 of The Highest Complaint among Malaysia Ministries received by Public Complaint Biro (PCB).

Total population of 638 nurses in all twelve public hospitals are shown in Table 1 below with the explanation in details. Similarly, (Hair Jr, Hult, Ringle, & Sarstedt, 2016; Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014) also recommended about minimum sample size for PLS-SEM analysis must be around 200 respondents, which no maximum number as the greater will bring the best result. Thus, the required sample size of this research is more than 200 which is 302; serve the best for further statistical analysis.

Table 1

*Stratified sampling with proportionate technique*

| S. No | States   | Total Nurses in ED | Total Population | Sample | Req. Sample size | Required sample from each state |
|-------|----------|--------------------|------------------|--------|------------------|---------------------------------|
| 1     | Perlis   | 23                 | 638              | 3.61%  | 302              | 11                              |
| 2     | Kedah    | 46                 | 638              | 7.21%  | 302              | 22                              |
| 3     | Penang   | 34                 | 638              | 5.33%  | 302              | 16                              |
| 4     | Perak    | 39                 | 638              | 6.11%  | 302              | 18                              |
| 5     | Selangor | 89                 | 638              | 13.95% | 302              | 42                              |



|    |                 |     |     |       |     |    |
|----|-----------------|-----|-----|-------|-----|----|
| 6  | Kuala Lumpur    | 198 | 638 | 31.0% | 302 | 93 |
| 7  | Pahang          | 43  | 638 | 6.74% | 302 | 20 |
| 8  | Negeri Sembilan | 23  | 638 | 3.61% | 302 | 12 |
| 9  | Johor           | 30  | 638 | 4.70% | 302 | 14 |
| 10 | Melaka          | 42  | 638 | 6.58% | 302 | 20 |
| 11 | Kelantan        | 35  | 638 | 5.49% | 302 | 17 |
| 12 | Terengganu      | 36  | 638 | 5.64% | 302 | 17 |

## Findings

The hypotheses result of structural model for direct and indirect relationship have been presented. Table 2. provides the summary of the results. H1 until H3 reported the relationship between three dimensions of independent variable which is person environment Fit and adaptive performance. Further, H4 reported direct relationship between WE and AP, as well as H5 until H7 reported the relationship between three dimensions of PE Fit and adaptive performance with mediating role of work engagement.

Table 2

### Summary of the Results of Structural Model Assessment

| Hypothesis | Relationships   | Std. Beta | Std. Error | t-values | p-values | Confidence Intervals |       | Decisions    |
|------------|-----------------|-----------|------------|----------|----------|----------------------|-------|--------------|
|            |                 |           |            |          |          | LCL                  | UCL   |              |
| H1         | PG fit and AP   | 0.119     | 0.057      | 2.088    | 0.019**  | 0.026                | 0.208 | Supported    |
| H2         | PJ fit and AP   | 0.214     | 0.059      | 3.642    | 0.000*** | 0.104                | 0.298 | Supported    |
| H3         | PS fit and AP   | 0.111     | 0.052      | 2.159    | 0.016**  | 0.029                | 0.202 | Supported    |
| H4         | WE and AP       | 0.144     | 0.051      | 2.842    | 0.002*** | 0.061                | 0.227 | Supported    |
| H5         | PG fit ->WE->AP | 0.009     | 0.011      | 0.772    | 0.441    | -0.010               | 0.035 | Not Mediated |
| H6         | PJ fit ->WE->AP | 0.031     | 0.014      | 2.179    | 0.030**  | 0.009                | 0.065 | Mediated     |
| H7         | PS fit ->WE->AP | 0.025     | 0.013      | 1.971    | 0.049**  | 0.004                | 0.055 | Mediated     |

Note: \*\*\* Significant at 1%, \*\* Significant at 5%  
AP – Adaptive Performance, WE – Work Engagement, PG fit- Person-group fit, PJ fit – Person-job fit, PS fit – Person-supervisor fit

## Discussion and Significance of the Study

### To the Hospitals and its Management

This study revealed that personality traits play a significant role in the actualization of the adaptive performance of nurses. In other words, the agreeableness, conscientiousness, and openness to experience of the nurses are a catalyst for their adaptive performance. It similarly established that a relationship exists between personality traits and work engagement. The hospital management can make use of this finding in instituting friendly

policies that can ignite and stimulate the traits in the nurses for the purpose of achieving effectiveness and efficiency.

The hospital management can also use the finding in coming up with plans and strategies that will promote the knowledge, skills, and ability of the nurses. For instance, the management can try to implement the strategy to boost employees' by matching their tasks to their specific skills, communicate effectively and provide adequate training with specific nursing practice consistently until it shows a result of improvement.

In addition, personality traits and PE fit are also recognized as essential for the achievement of performance and bring influence to work engagement. Therefore, the hospital management can make use of the finding in their nurses' recruitment criteria and put into consideration to recruit new nurses not only based on their person's fit but also individual's personality that can be evaluated through some test. It can also be used by the hospital in its training and retraining program in order to polish and enhance nurse's to be fitted well with their job, the supervisor as well as the group which refers to emergency department's team (Bhatti, et al., 2018; Amarneh, & Muthuveloo, 2020).

This study and its findings focus on nurses in the public hospital in the Malaysian public hospitals. The study provides several conceptual and practical insights to the nurses in the area of PE fit factors, which are vital for increasing their work engagement and eventually lead to the improvement of adaptive performance. It gives an opportunity for the nurses to discover their personality traits that are capable of improving their performance.

#### **To the Nurses**

The study revealed that Malaysian public hospital is the impetus for work engagement and performance. The nurses can make use of this finding in identifying that knowledge, skills, and abilities in being relevant in their job, and sustain and retain their job. It will also assist the potential nurses who are seeking nursing appoint to recognize the Malaysian public hospital are necessary for the achievement of their aim. Nurses and potential nurse can attend training and retraining programs organized by their hospitals or other competent bodies with a view to building strong knowledge and skills required for effective and efficient performance (Dousin, et al., 2019).

#### **To the Policy Makers and other Relevant Stakeholders**

The nursing profession is not let loose, rather it is a regulated profession. This is because it deals with the safety of the lives of patients. The finding of this study will, therefore, be relevant to the ministry of health in Malaysia in making decisions that are relevant to the adaptive performance of nurses (Park, et al., 2020; Abdullah, et al., 2018; Chong, et al., 2020). This study is also helpful for the health sectors, service sectors and to other stakeholders as it will provide fundamental knowledge to improve employees' performance specifically adaptive performance.

The policymakers in the tertiary educational institutions and professional nursing bodies are not left out in founding this study useful and relevant. This is because they produce graduates of nursing for society absorption. It will provide an insight for them to produce suitable graduates who are equipped with necessary knowledge, skills, and competence that



suit the work environment and demand in the hospital setting. The universities and other tertiary institution awarding bachelor degree and diplomas in Nursing should ensure that their syllabus center on improving the general competence of the graduates in terms of knowledge, skills, and capabilities that match the profession, hospital, job, groups and supervisors' demand.

### **Limitations of the Study and Suggestions for Future Studies**

The significant contribution of this study to the body of knowledge; notwithstanding, the study has its limitations. The first limitation of this study is inherent in the sample used in the study. The study used nurses in the public hospital in twelve states in Malaysia. The findings of this study should not focus on ED nurses only. Instead, it should apply to other medical professionals in the hospital such as doctors, medical laboratory scientists, pharmacists, and others. Likewise, it cannot be generalized on other professionals such as the engineers, accountants, and people at the managerial levels. This is because each profession has different and distinct job descriptions.

The job description of the nurse involves taking care of the patients while other jobs may be dealing with customer or employees. Based on this coverage limitation, a future study can examine the adaptive performance of other medical professionals such as doctors, medical laboratory scientist, and pharmacists in the hospital setting. Therefore, it is recommended that future study can be expended to a larger sample, in terms of different profession or different industry and another country. Thus, the use of a larger sample could help to generalize the study's findings.

Furthermore, this study was conducted in the public hospital, hence, the results of the study cannot be generalized on the private hospitals. This is because each category of a hospital has different operations and make use of various medical facilities. For instance, the number of nurses in public hospitals may be more than private hospitals because of the high number of patients and affordable cost. Consequent upon the number of patients, the magnitude of their operation may be high; hence, they may have the adaptive performance that is different from that of the nurses operate in the private hospital with a limited number of patients.

In this situation, the nurses' perception of fit and personality traits towards their hospital and performance may be different. However, the study used a cross-sectional design which deals with data collection at one point in time. One of the limitations of cross-sectional research design is that it gives no consideration to change over time before the analysis of data. In other words, any issue or policy made after the data collection which may affect the variables under consideration will not be captured. For instance, a policy is made by government or nursing regulatory authority shortly after the data collection which would affect the operation of the nurses would not be considered in the study. This may affect the conclusion of the study. Based on this study, it is recommended that future studies should use longitudinal design in order to capture data for a long period of time.

Moreover, the study only focused on individual factors, which were an individual's personality and person-environment fit (PE fit) towards employees' adaptive performance. As the study only focused on individual factor, thus, it is recommended for future studies to investigate the effect of organizational factors, such as hospital's performance as a whole;

or to combine both individual and organizational factor towards enhancing employees' performance and engagement.

### **Conclusion**

In the first instance, the study has empirically proved that there is a strong significant relationship between PE fit is found to have an influence on the adaptive performance of nurses. Thirdly, the study confirmed that PT generally could influence on the work engagement of nurses. Furthermore, PE fit's dimensions are statistically found to have a great impact on the work engagement of the nurses. Also, the study lends empirical support on the relationship between work engagement and adaptive performance. Finally, the study confirmed the mediating effect of work engagement on the relationship between personal environment fit and adaptive performance on the other hand.

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