HOSPITAL NURSES' PSYCHOLOGICAL CAPITAL AND WORK ENGAGEMENT – ARE THEY REALLY RELATED? THE CASE OF AN INDONESIAN HOSPITAL

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Abstract

Background: Nurses' excellent job performance is vital for the hospitals' healthcare services, particularly in achieving a standardized medical care comprising of patient safety. Studies have noted this preference by asserting that psychological capital is one of the antecedents of excellent work performance. Yet, little has been focused on the work performance of nurses in this aspect.

Aims: This study thus aims to analyze the relationship of psychological capital and work engagement among nurses attached to an urban general hospital in Indonesia.

Methods: A questionnaire (PCQ-24) was used to measure the psychological capital variable and work engagement (Utrecht Work Engagement Scale) among 165 clinical nurses working in the inpatients' ward. The simple random sampling approach was applied and a total of 91 questionnaires were found to be suitable for analysis. The descriptive values and linear regression were utilized for detecting the correlation coefficients of each variable.

Results: Findings indicate that most of the respondents were females (71.4%) who were mainly aged between 31-39 years old (42.9%) and the highest component in their psychological capital was hope (64.8%) while their work engagement was vigor (82.4%). Overall, it can be said that psychological capital was significantly correlated to vigor and dedication in work engagement ($p<0.05$). There was no correlation between hope ($p=0.104$), and resilience ($p=0.159$) with absorption of work engagement. Conclusion: Psychological capital variables were correlated to work engagement except for some variables. Low absorption in the nurses' work engagement could be caused by their high work load at hospitals. Nurses' job characteristics at the hospitals may be the cause of this finding.

Keywords: *Nurse, Psychological capital, Work engagement*

Introduction

With the development of the medical and health services in Indonesia, there is now a need to improve the quality of the nursing services provided by hospitals. Undoubtedly, the health care system is affected by its health care professionals. Therefore, for the health care system to reach a high quality in services, hospitals would require nursing staffs who are competent (1). The total number of nurses currently serving in Indonesia, as of 2017, was 345,276 with an estimated total population of 261,890,872 people (2). This is in combination with the number of midwifery nurses which amounts to 198,110. This means that the density of the nurses and midwifery nurses is 20.75 per 10.000 population. This number is still far below the WHO standard of 40 nurses and midwifery nurses per 10.000 population (3). This fact gives us an understanding of the shortage of nurses in Indonesia. About 58.26% of the total number of nurses work in hospitals, thus they mainly serve as the health care professionals in hospitals. Among all the professions in Indonesia, about 48.36% of them or 223, 257 of them are nurses who work in the hospital sector (2).

The sustainability of nurses is necessary but it is often hindered by their work overload, limited resources, lack of promotion, and the lack of development opportunities opened to nurses (1). Nursing is considered a stressful job, and nurses have been noted to carry high scores of stress related to their workplace, as compared to other professions (4). The nursing profession is very much linked to stress and psychological disease (5) with the common problem being their high work-related stress, burnout, and poor health. Nurses usually work in a problematic environment, which over time, would lower their work performance, and their ability to offer excellent patient care (6).

Work engagement is therefore, an important element for nurses since they are constantly in touch with the various social systems within the society (1). Low work engagement has been reported among nurses (7), but yet hospitals expect nurses to be proactive,

initiative, responsible, and have work excellence. Undoubtedly, nurses who are energetic, and dedicated to their work tend to absorb their work well, hence they are more work-engaged (8). Therefore, retaining skillful and nurses who are engaged in their profession is an important issue for hospitals (9).

Work engagement is defined as a positive, fulfilling, work-related state of mind. It is characterized by vigor, dedication, and absorption. Vigor is characterized by high levels of energy, and mental resilience while working. Dedication is being strongly involved in one's work, and experiencing a sense of significance, enthusiasm, and challenge. Absorption is being fully concentrated, and happily engrossed in one's work, whereby time passes quickly, and where one has difficulties in detaching oneself from work. Engaged employees have high levels of energy; they are enthusiastic about their work (10,11), and they have the genuine willingness to contribute to organizational success.

Engaged employees can perform better because they have more positive emotions, better health status, and heightened resources (12). Engaged employees have also been shown to be more creative, perform better, has positive organizational citizenship behavior, and they consider client satisfaction. Nonetheless, one's work engagement may also fluctuate within the individual, across time and conditions (13). The level of one's work engagement may differ, depending on one's personal resources, work characteristics, and job experiences (14). Thus, the nurses' work engagement may also vary depending on their work settings, age and work experiences (7).

Engagement can be seen as a constructive indicator of the employee's commitment (1). The nurses' work engagement can affect their attitude towards their patients in a more positive manner. Thus, low work engagement is likely to affect the patients' health adversely, thereby decreasing the quality of the nursing services (15). The relationship between the nurses' job resources, and their work

engagement can be partially mediated by their basic needs and satisfaction (16). This suggests that a person's individual characteristics have some influence in his/her work engagement, independently (7).

Engaged employees have been noted to carry higher levels of personal resources (13), one of which is their psychological resources. The individual's psychological capital is a form of capital that reflects the individual's internal resources and these can be drawn upon so as to allow the individual to succeed in what he/she does (17).

Psychological capital (PsyCap) is defined as the individual's positive psychological state of development. (7) characterized it as having the confidence (efficacy) to take on challenges, and the ability to exert the necessary effort so as to succeed at challenging tasks (18). This characteristic of the individual enables the person to make positive attributions (optimism) about succeeding now, and in the future (14). Such individuals persevere towards their goals, and when necessary, redirect their paths towards their goals (hope) in order to succeed, and (4) when engulfed with problems and adversity, they are able to sustain and bounce back, and even beyond (resiliency), to attain success (19). PsyCap is the main predictor of work engagement (18), hence it is important to study the relationship between PsyCap and work engagement (8).

Empirical studies looking at the relationship between PsyCap and work engagement among nurses (20) are far in between. Of those studies that do, many were mainly concentrated on Western countries (9). Thus, it is imperative that more research be conducted on Asian countries so as to gather more evidence that can help us to better understand about the relationship of the antecedents of nurses' work engagement and other factors (21), for instance, PsyCap.

This study aims to contribute to literature with regards to our understanding of nurses' PsyCap and their work engagement. In this study, we examine the correlation of each psychological capital variables with each

characteristic of work engagement, as summarized in Figure 1.
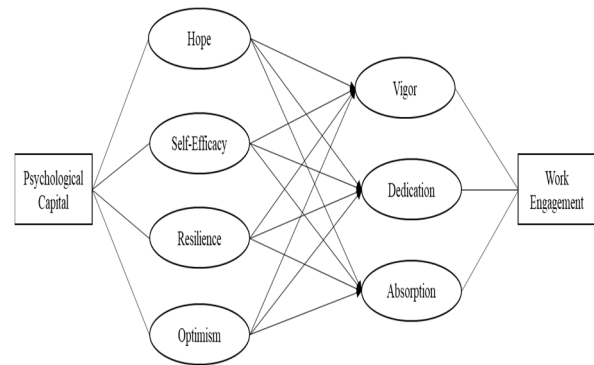
Figure 1: Conceptual Model

Methods

This study is quantitative in design; it is a cross-sectional study based on a self-reported questionnaire which consists of two sections. Respondents were recruited based on simple random sampling, and data were extracted since December 2018. Utrecht's Work Engagement Scale (UWES) consisting of 16 items were categorized into three subscales of vigor, dedication, and absorption. These were utilised to measure the nurses' level of work engagement. The questionnaire applied has been validated in several countries (10,11). The PsyCap questionnaire (PCQ) developed by Luthans comprising 24 items were categorized. They were utilized to measure the nurses' psychological capital into four subscales of efficacy, hope, resilience, and optimism. Each question used the 6-point Likert scale for responses. The research site involved the Bhayangkara Kediri Hospital located in East Java, Indonesia. It is characterized as a general military-based hospital with a total of 165 nurses working at the inpatient wards. A total of 100 nurses served as respondents. But upon screening only 91 of the questionnaires were found suitable for analysis, and nine were incomplete. The SPSS software version 25 was used to generate the descriptive and inferential analysis. Cronbach's alpha for reliability showed sig > 0.06, and Pearson's correlation for validity showed sig < 0.05, for all data. Thus the data used for this study were both reliable and valid.

Ethical Approval

This study obtained ethical approval from the Health Research Ethics Committee, Faculty of Public Health Universitas Airlangga, Indonesia (No: 613-KEPK).

Results

In this study, each of the respondents (N=100) were given a questionnaire during their shift at the Inpatient wards of Bhayangkara Kediri hospital. The questionnaires were then collected and checked for their contents. The completed and valid questionnaires were utilised for the SPSS entries. It was found that more than three quarters of the respondents (N=65) were females. Majority were in the age range between 31 to 39 years old (N=39) and the length of their work experiences ranged between 6 to 10 years (N=28). Their profile is displayed in Table 1.

Table 1: Respondent Characteristics

Characteristics	N (%)
Sex	
Female	65 (71.4%)
Male	26 (28.6%)
Age	
≤ 30 years	37 (40.6%)
31-39 years	39 (42.9%)
≥ 40 years	15 (16.5%)
Length of work	
≤ 5 years	26 (28.6%)
6 -10 years	28 (30.7%)
11-15 years	22 (24.2%)
16-20 years	7 (7.7%)
> 20 years	8 (8.8%)

The descriptive analysis showed that the overall mean of the nurses' psychological capital score was 3.976 (SD .449) and hope was the highest subscale, with a mean of 4.062 (SD .512). From the results, we also know that resilience has the least mean of 3.883 (SD .567). The overall mean for work engagement was 4.593 (SD .548) while the highest subscale was dedication, with a mean of 4.850 (SD .665). Absorption was at the lowest with a mean of 4.235 (SD .735). The result generated from this study showed more emphasis on dedication, which was higher than vigor or absorption. This

outcome is consistent with other studies (22), such as Aboshaiqah who looked at nurses in Saudi Arabia, especially those in the military force hospitals. Likewise, Aboshaiqah also noted dedication to have the highest score (7). Nonetheless, the overall score for work engagement of this study was found to be more competitive than other empirical research (10,11). For instance, our findings of dedication for work engagement showed a score of 4.593 (SD .548). It was lower than that of Lepistö, with 4.98 (SD .87) (22), but nevertheless, higher than the score determined by Aboshaiqah, with 4.1 (SD 1.0) (7), Wan, with 3.54 (SD 1.49) (9), and Wang's score of 3.44 (15). Using the 7-point Likert scale, Jenaro's study showed that the mean for vigor was 3.47 (SD 1.44), for dedication was 3.89 (SD 1.42), and for absorption was 3.48 (SD 1.37). While some of the findings of previous studies correlated with our current study, others did not. This suggests that there could be some discrepancies which need to be further explored (21). Table 2 presents the results for the questionnaire analysis.

Table 2: Descriptive Analysis

Variables	Mean	SD
Psychological Capital	3.976	.449
Hope	4.062	.512
Self-Efficacy	4.006	.521
Resilience	3.883	.567
Optimism	3.954	.550
Work Engagement	4.593	.548
Vigor	4.672	.650
Dedication	4.850	.665
Absorption	4.235	.735

To obtain the calculations, the result score from each question in the questionnaire was classified as low, average, and high, for each subscale's total amount. From the score of each subscale of the nurses' psychological capital, we realized that the nurses have high hopes and self-efficacy, but average optimism, and low resilience. From the score of each subscale of the nurses' work engagement, we noticed that the nurses have high levels of

vigor and dedication, but an average level of absorption. Table 3 further illustrates this.

Table 3: Subscale Categories Result

Variables	Low	Average	High
Psychological Capital			
Hope	7 (7.7%)	25 (27.5%)	59 (64.8%)
Self Efficacy	3 (3.3%)	30 (33%)	58 (63.7%)
Resilience	43 (47.3%)	24 (26.4%)	24 (26.4%)
Optimism	22 (24.2%)	39 (42.9%)	30 (33%)
Work Engagement			
Vigor	4 (4.4%)	12 (13.2%)	75 (82.4%)
Dedication	4 (4.4%)	15 (16.5%)	72 (79.1%)
Absorption	23 (25.3%)	51 (56%)	17 (18.7%)

These results differ from those of Bogaert which showed high levels in all the three elements (6). The study by Jenaro showed that 33% of the nurses experienced high dedication, 20.4% experienced high vigor, and 36.7% experienced high absorption (21).

We further analyzed the correlation of each psychological capital subscale with each work engagement subscale, by using linear regression (t-test). The outcome showed the correlation for all subscale (p < 0.05) except for hope (sig .104), and resilience (sig .159) with absorption. Although the overall score of PsyCap was significantly correlated to the overall score of work engagement (sig .000), these results were different from Wang (15) which showed that self-efficacy, and resilience were not significantly associated with vigor, dedication, and absorption (15). The significance of each correlation can be seen in Table 4.

Table 4: Linear Regression Analysis

Psychological Capital	Work Engagement		
	Vigor	Dedication	Absorption
Hope	.000	.000	.104
Self-Efficacy	.000	.000	.005
Resilience	.004	.044	.159
Optimism	.000	.000	.026

Discussion

According to studies, psychological capital captures the motivation and capability which then drives the interaction with job constraints and opportunities (23). PsyCap has been shown to be correlated to innovative performance, employee well-being, commitment to organization, and creativity (24). It appears that if employees were self-efficacious, they would also show the right skills and abilities to achieve better performance. In this regard, nurses' high levels of hope would ensure that the nurses have the will and the means to accomplish a specific goal. Literature has shown that optimists are employees who make positive internal attributions, with regards to their current and future success while resilient individuals are those who are able to adapt to challenging circumstances positively (25). These individuals work by looking forward to a positive future, in spite of serious threats, setbacks, or maladjustment (17). They also tend to maintain a positive attitude, with the ability to bounce back when faced with problems and adversity (12). They also maintain a positive perspective in most circumstances with more capabilities to solve problems when confronted with challenging situations. Their resilience enables them to continue fighting (12). Further, employees who are self-efficacious, hopeful, optimist, and resilient (PsyCap), generally feel energetic, and dedicated to their work whilst immersed in their profession (25). This makes work easier to manage since time seems to fly (10,11). In this regard, the nurses who were respondents in this study could be described as those with high work engagement (13). Clearly, PsyCap influenced the strength of the emotional relationship between employees and

organizations directly, and also, their values and goals (17). Employees with high PsyCap tend to be more engaged with more vigor; they are strongly involved, and engrossed in their work (25). Engagement is evidently influenced by the internal capability of the individuals to use their existing resources, such as PsyCap (17).

Based on this, PsyCap may be considered as an effective personal resource for nurses to improve their work engagement. The effects of PsyCap have been found to be different across occupational groups, but PsyCap and its components have been found to act as mediators for work engagement (15). Greater psychological empowerment may increase the likelihood of the nurses to advance their education beyond what they have, and this can also bring benefits to them as well as their patients, not to mention the hospitals. Highly motivated and engaged nurses are critical for hospital success (24).

Engagement is also related to customer satisfaction, in-role performance, and financial returns (26), hence, engagement may be included as the fifth element in the Balanced Score Card (17). Other consequences of work engagement include: customer loyalty, general health, organizationally valued job outcomes, turnover intentions, extra-role performance, and job satisfaction (24). Engaged employees tend to work hard (vigor), are involved (dedicated), and feel happily engrossed (absorption) (10,11) with better job safety experiences (14). Engaged employees also tend to be more aware of the organizational context; they are also more likely to improve their role performances (1). Therefore, the services provided by such nurses will be of considerable importance, particularly at a time when there is a short supply of nurses, aggravated by the reduction in health care provisions (7). Good patient care requires engaged nurses who are dedicated, energized, and absorbed (9). Based on this, it is important to have nurses with high PsyCap and well engaged in their work; this will reduce the high turnover rate and contribute to a competitive health care environment (20).

Some ways to improve work engagement are to emphasize on feedback (14) through which nurses can share their insights as to how processes should be improved, and also their inspiring stories about patients. Finding meaning in their work makes the nurses feel more energized, and this can increase work engagement (1). Moreover, work engagement may also be influenced by other factors such as work experience, peer support, good leadership, and communication (7). Therefore, hospitals need to take these factors into account because the nurses' job demands and their lack of resources can create more stress, and mental and physical ill-being (23).

This study has shown that the highest score among the 91 nurses of one Indonesian hospital was their dedication. In this regard, work dedication is assumed to be the major element of work engagement because of its positive impact on the nurses. Dedicated nurses perceived their duties to be important, and so difficulties would be seen as challenges. Dedication, however, would help these nurses to find innovative ways of managing their challenges. The inter-disciplinary team focusing on the quality of care have been predicted by dedication (7), and vigor and dedication have been predicted by job satisfaction, high quality work life, low social dysfunction, and low problems associated with patient care (21).

Nurses' work engagement can thus, be predicted on three levels: organizational level, task level, and personal-level. The main dimension of the nurses' job characteristics such as task variety, task identity, task significance, autonomy, and job feedback can increase their perception of work meaningfulness. This can drive the nurses to be more engaged (9). PsyCap can improve the nurses' engagement by reducing their role stress which is mediated by their job demands. Likewise, resilience and optimism can help the nurses to have positive insights of their jobs, and so have a better psychological well-being. Hope and efficacy are also required by the nurses when dealing with higher job demands via positive psychological resources (23).

Low vigor in nurses may be due to their high physical, and psychological demands while the lack of rewards such as promotion, stability, respect, and income may reduce the nurses' dedication and their work absorption (15). So far, the relationship between PsyCap, and work engagement has been mostly theoretical (25). Each component of PsyCap has been conceptually related to work engagement. The development of engagement is dependent on the development of PsyCap, over time (18) but some studies (24) have found a significant and positive relationship between PsyCap, and work engagement. Each dimension of the PsyCap makes a unique contribution towards the employee's work engagement (17).

PsyCap has been considered as a dimension of the self that is capable of helping the individual to combat negative outcomes at the workplace. It appears that extrinsic efforts could reduce one's optimism, thereby resulting in low vigor, and low dedication. In contrast, job rewards could increase one's optimism, thereby leading to an increase in vigor and dedication. In this regard, PsyCap and its components had helped to improve the nurses' work engagement directly. It had also mediated the relationship of other factors with work engagement (15), hence it can be deduced that higher PsyCap can predict the nurses or employees' subsequent inclination towards their work engagement (13).

This study is also restricted by some limitations. The fact that we had a sample of nurses recruited from one single hospital restricts the generalizability of our findings. Thus, other hospitals with different work culture and organization characteristics need to be examined.

Conclusion
Our composite score of the nurses' work engagement was noticeably high when compared to other studies. Each component of the PsyCap was significantly correlated to work engagement, except for hope and resilience with absorption. The relationship of the psychological capital and work engagement among the nurses may be different because of their job characteristics and other personal resources. Therefore, future research looking at this kind of relationship is still needed, so as to reveal a more comprehensive model for application.

References
1. Beukes I & Botha E. Organisational commitment, work engagement, and meaning of work of nursing staff in hospitals. SA J Ind Psychol. 2013;39(2):1-10.
2. Indonesia Ministry of Health. Health Statistics. Jakarta: Indonesia Health Ministry; 2018.
3. World Health Organization. World Health Statistics 2018: monitoring health for the SDG's, Sustainable Developmental Goals. Geneva: World Health Organization; 2018.
4. Fathi A. Workplace stressors and coping strategies among public hospital nurses in Medan, Indonesia. Hat Yai: Prince of Songkla University; 2010.
5. Zurlo MC, Vallone F & Smith AP. Effects of individual differences and job characteristics on the psychological health of Italian nurses. Eur J Psychol. 2018; 14(1):159-175.
6. Bogaert PV, Heusden DV, Timmermans O & Franck E. Nurse work engagement impacts job outcome and nurse-assessed quality of care: model testing with nurse practice environment and nurse work characteristics as predictors. Front Psychol. 2014;5:1261.
7. Aboshaiqah AE, Hamadi HY, Salem OA & Zakari NMA. The work engagement of nurses in multiple hospital sectors in Saudi Arabia: a comparative study. J Nurs Manag. 2016;24:540-548.
8. Waal JJD & Pienaar J. Towards understanding causality between work engagement and psychological capital. SA J Ind Psychol. 2013;39(2):1-10.

9. Wan Q, Zhou W, Li Z, Shang S & Yu F. Work engagement and its predictor in registered nurses: a cross sectional design. Nurs Health Sci. 2018;2018:1-7.

10. Bakker AB & Demerouti E. Towards a model of work engagement. Career Dev Int. 2008;13(3):209-223.

11. Bakker AB, Schaufeli WB, Leiter MP & Taris TW. Work engagement: an emerging concept in occupational health psychology. Work Stress. 2008;22(3):187-200.

12. Kang HJ & Busser JA. Impact of service climate and psychological capital on employee engagement: the role of organizational hierarchy. Int J Hosp Manag. 2018;75:1-9.

13. Bakker AB & Albrecht S. Work engagement: current trends. Career Dev Int. 2018;23(1):4-11.

14. Attridge M. Measuring and managing employee work engagement: a review of the research and business literature. J Workplace Behav Health. 2009;24:383-398.

15. Wang X, Liu L, Zhou F, Hao J & Wu H. Associations of occupational stressors, perceived organizational support, and psychological capital with work engagement among Chinese female nurses. BioMed Res Int. 2017;2017:1-11.

16. Hakanen JJ, Schaufeli WB & Ahola K. The job demands-resources model: a three year cross-lagged study of burnout, depression, commitment, and work engagement. Work Stress. 2008;22(3):224-241.

17. Thompson KR, Lemmon G & Walter TJ. Employee engagement and positive psychological capital. Organ Dyn. 2015;538:1-11.

18. Alessandri G, Consiglio C, Luthans F & Borgogni L. Testing a dynamic model of the impact of psychological capital on work engagement and job performance. Career Dev Int. 2018;23(1):33-47.

19. Luthans F, Youssef CM & Avolio BJ. Psychological Capital and Beyond. Unites States of America: Oxford University Press; 2015.

20. Karatepe OM & Avci T. The effects of psychological capital and work engagement on nurses' lateness attitude and turnover intentions. J Manag Dev. 2017;36(8):1029-1039.

21. Jenaro C, Flores N, Orgaz MB & Cruz M. Vigour and dedication in nursing professionals: towards a better understanding of work engagement. J Adv Nurs. 2011;67(4):865-875.

22. Lepistö S, Alanen S, Aalto P, Järvinen P, Leino K, Mattila E & Kaunonen M. Healthcare professionals' work engagement in Finnish University Hospitals. Scand J Caring Sci. 2018;32(2):979-986.

23. Grover SL, Teo STT, Pick D, Roche M & Newton CJ. Psychological capital as a personal resource in the JD-R model. Pers Rev. 2018;47(4):968-984.

24. Paek S, Schuckert M, Kim TT & Lee G. Why hospitality employees' psychological capital important? the effects of psychological capital on work engagement and employee morale. Int J Hosp Manag. 2015;50:9-26.

25. Karatepe OM & Karadas G. Do psychological capital and work engagement foster frontline employees' satisfaction? a study in the hotel industry. Int J Contemp Hosp Manag. 2015;27:1-48.

26. Xanthopoulou D, Bakker AB, Demerouti E & Schaufeli WB. Reciprocal relationships between job resources, personal resources, and work engagement. J Vocat Behav. 2009;74:235-244.