



Workload and Work Engagement among Nurses in Public Hospitals: Moderating Role of Religious Spirituality

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Abstract

The aim of this study is to investigate the moderating role of religious spirituality on the relationship between workload and work engagement among nurses in Malaysia Public Hospitals. A quantitative correlational research and questionnaire method is applied in this study. Sample sizes of 364 that consist of Staff Nurses were selected through multistage sampling. SPSS and Smart-PLS were utilized as the analytical tools of this study. The assessment of the inner model (measurement model) and the assessment of the outer model (structural model) were conducted to test the hypothesis. The result shows that it supports the relationship between workload and work engagement. But it shows that religious spirituality has no moderating effects on the relationship between workload and work engagement. Future studies might have significant result relating to moderating role of religious spirituality in mitigating the effect of workload on work engagement. By understanding the relationship among the constructs in this study, healthcare institutions could improve work engagement level of nurses in spite of the high workload. The management also could coordinates and provides nurses a training relating to religious spirituality to facilitate nurses to be more resilient in dealing with job complexity of nursing tasks and high job demands, which in turn it will enhances the nurses' work engagement level.

Keywords: Workload, Work Engagement, Religious Spirituality, Nurses.

1.0 Introduction

There are increasing numbers of health travelers seeking treatment in Malaysia, especially health travelers from South-East Asia (from 641,000 people in year 2011 up to 921,500 people in year 2017). In 2015, 2016, and 2017 consecutively, Malaysia was crowned by the International Medical Travel Journal (IMTJ) as the 'Best Country in the World for Healthcare' and as the 'Medical Travel Destination of the Year' ("Countries with the Best Healthcare in the World", 2016; Thoo, Khairuddin, Tat, Sulaiman, Lai, & Mas'od, 2018). These facts indicate that Malaysia's potential as a preferred healthcare travel destination of the world was increasing, which in turn become a powerful engine in contributing to economic growth of Malaysia (Onn, 2015).

Nonetheless, there were also negative effects arises due to this increasing demand on Malaysia healthcare industry. For instance, due to shortages

of nurses, the existing workload and burnout among nurses will be exacerbates (Carayon & Gurses, 2008; Al-Homayan, 2013), which in turn can jeopardize their psychological, physical, and mental health (Harrison, Dowsell, & Wright, 2002) and lead nurses to disengage from their tasks. These circumstances also will result in health care delivery incident due to negligence, lack of concentration, rudeness, as well as inflexibility and intolerance for inevitable obstacles (Matula & Uon, 2016). Meanwhile, nowadays, patients' expectation is no longer limited to diagnosis and treatment, but services and care they receive during their stay in the hospital (Hee, Kamaludin, & Ping, 2016). Thus, evaluating work engagement among nurses in taking an active part to engage well, act quickly, and effectively is important in order to bring satisfaction to patients, decrease patient waiting time, increase efficiency of patient care, and sustain high-quality healthcare delivery (Grabau, 2016).

Nonetheless, despite of numerous studies that found the negative effect of workload on work engagement, this study found other inconsistent findings that state that workload does not necessarily lead to disengagement (Crawford, Lepine, & Rich, 2010; Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007) even it have positive relationship with workload. Thus, due to these inconsistent findings, this study incorporates religious spirituality as moderating variable as an effort to further assess the strength of the relationship between workload and work engagement. Thru religious spirituality as a moderating variable, this study expects that individuals able to cope with hardship, to interpret any unwanted events that happen to them and any types of workload exerted on them positively, which in turn leads to self-encouragement to work harder and engaged well (Seligman, 2002) in spite of hardship.

Overall, the negative effect of workload will mitigates by incorporating religious spirituality as moderating variable. Because, high religious spirituality individuals tend to have higher level of mental resilience, positive emotions, as well as very good mental and psychosomatic health; which all of these were also known as important criterion in work engagement (Bakker, Schaufeli, Leiter, & Taris, 2008). For aforementioned reasons, this





study highlights the important role of religious spirituality among nurses in moderating the relationship between workload and work engagement.

2.0 Literature Review and Hypotheses Development

2.1 The Relationship between Workload and Work Engagement

Workload illustrated as a situation where employees filled with a pile of tasks and the inability to complete the tasks within the given time (Van Veldhoven & Meijman, 1994). This time pressure with overload tasks will lead to high job stress and job strain, which in turn result in negative work outcomes such as disengagement, absenteeism, and burnout (Van Woerkom, Bakker, & Nishii 2016) due to lack of energy and mental connectivity (Taipale et al. (2011). Consistent with Llorens, Schaufeli, Bakker, and Salanova's (2007) findings that: "workload affected people in their physiological connection with the work thus resulting in a negative effect on work engagement". Aryee, Srinivas, and Tan (2005) also further stated that individuals who perceive unable to handle their workload tend to experience exhaustion which negatively influences one's engagement and motivation to respond to the job demands. In brief, it can be concluded that there is a negative relationship between workload and work engagement as stated by majority of researchers (Schaufeli & Bakker, 2004; Ahmed, 2017; Tomic & Tomic, 2011; Hakanen, Bakker, & Demerouti, 2005; Rothmann & Jordan, 2006).

Conversely, Crawford, Lepine, and Rich (2010) found that workload does not necessarily lead to a negative impact on work engagement or disengagement. It all depends on the individual itself, the individual who considers the workload as a challenge will feel to have more energy and relationships with the work, while individuals who assuming them as a hindrance at work source them to negatively affect their work engagement (Crawford, Lepine, & Rich, 2010). Similar finding also found by Bakker, Hakanen, Demerouti, and Xanthopoulou (2007) that high workload enhanced work engagement among 714 Dutch employees. In addition to above contradictions finding, Bakker et al. (2006) found that workload in term of time pressure were positively related to engagement. Contrary to the findings of Sonnentag (2003), whereby there was no any significant link between workload in term of time pressure and work engagement. Overall, owing to these inconsistent, ambiguous, and varied findings, the study on the relationship between workload and work

engagement required further empirical attention. Thus, this study highlights the empirical finding on the relationship between workload and work engagement and hypothesize that:

H1: There is a negative relationship between workload and work engagement.

2.2 The Moderating Effect of Religious Spirituality on the Relationship between Workload and Work Engagement

This study incorporates moderating effect in the research model as suggested by Baron and Kenny (1986) owing to the inconsistent findings on the relationship between workload and work engagement found. Thus, as an effort to moderate the relationship between workload and work engagement, religious spirituality was incorporated as moderating variable because it acts as one of the most important factors that affect higher quality of work engagement (Baldachino, 2008; Breevaart, Bakker, & Demerouti, 2014; Roof, 2015). Seligman (2002) further stated that "religious spirituality enables some individuals to interpret some psychological pressures exerted on them and unwanted events that happen to them positively, that simultaneously encourage them to commit to hard work and engaged well". This statement indirectly implies that religious spirituality enables some individuals to cope with psychological pressures due to high job demands positively, which in turn result in higher work engagement and productivity. This was due to the huge role of religious spirituality as stress coping strategy.

For Instance, in a stressful environment, nurses are confronted on a daily basis with multiple job demands (e.g. mental demands, emotional demands, physical demands), which can jeopardize their physical and mental health (Harrison, et al, 2002). In such cases, by having high religious spirituality as a resilience source during hardship, nurses will be happier in their lives and happily engrossed in work (Faribors, Fatemeh, and Hamidreza, 2010). For the reason that religious spirituality involves the presence of a relationship with God that affects the individual's self-worth, sense of the meaningfulness of work and purpose to life, and connectedness with others and nature (Nasr, 1997; Lines, 2006; Duchon & Plowman, 2005) that will enhances individuals' well-being and quality of life (Karakas, 2009). Which in turn, it will encourage the individual to engage well in spite of hardship as religious spirituality results in higher level of emotional stability and mental resilience, as well as very good mental and psychosomatic health, which is also known as important criterion in work engagement (Bakker,



Schaufeli, Leiter, & Taris, 2008). Supported by Van der Colff and Rothmann (2009) that work engagement among nurses is illustrated as emotional stability, conscientiousness, and low job stress. Thus, derived from the above discussions, this study hypothesized that:

H2: Religious spirituality moderates the relationship between workload and work engagement.

3.0 Methodology

This research employed the descriptive quantitative correlational method. The total of nurses working at public hospitals in Malaysia was the population frame of this study. Anyhow, owing to the large population of nurses, large number of public sectors, and the large geographical area to be covered as well as the constraints of manpower, time, and cost, this study only conducted at Public Hospitals in Peninsular Malaysia. For similar reasons, multistage sampling is employed in this study.

The target population was the total of Staff Nurses from one hospital from each region in Peninsular Malaysia that selected randomly. Since Peninsular Malaysia was divided into 4 regions, four hospitals were chosen (7453 Staff Nurses in total). Namely, Hospital Pulau Pinang (HPP) represents Northern Region, Hospital Kuala Lumpur (HKL) represents Central Region, Hospital Sultanah Aminah Johor Bahru (HSAJB) represents Southern Region, and Hospital Sultanah Nur Zahirah (HSNZ) represents East Coast. Thus, the target population of this study is about 7453 Staff Nurses. Thus, based on this target population, Krejcie and Morgan (1970) suggested 364 Staff Nurses as the sample size of this study.

3.1 Research Framework

Three variables were identified in this study, which was workload as independent variable, work engagement as dependent variable, and religious spirituality as moderating variable. Therefore, the following framework (Figure 1) is proposed in this study.

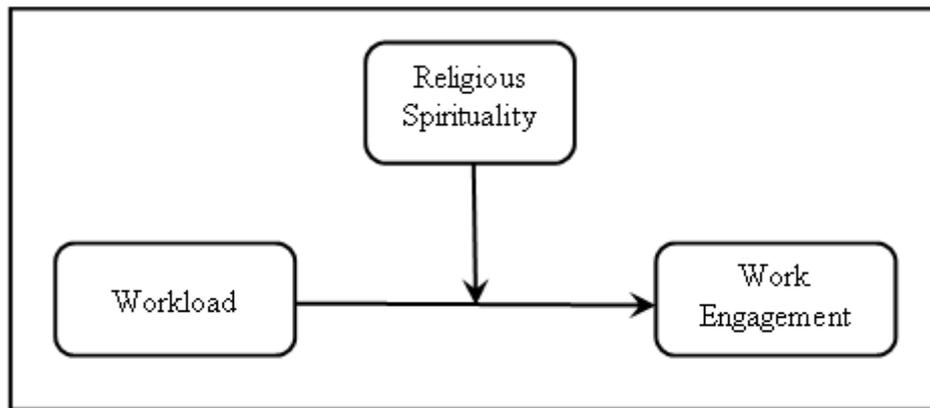


Figure 1: Research Framework

3.2 Data Collection

From 364 questionnaires that were distributed to the respondents, the researcher only obtain 349 valid questionnaires. The questionnaire divided into four sections. The first section was relating to respondent's demographic information (e.g. age, current ward, length of employment as a nurse). The second section consists of 17 questions set to measure work engagement. The third section consists of 5 questions set to measure workload. While the last section consists of 11 questions, it was used to obtain information about the moderating variable (i.e. religious spirituality).

3.3 Operational Definition and Measures

Work engagement is defined by Schaufeli and Baker (2003) as "a positive, fulfilling, and work-related state of mind that is characterized by vigor, dedication and absorption". While workload is

described by Schnall, Landsbergis, and Baker (1994) as "too much work to do in too little time or work too many hours on the job". In term of religious spirituality, Nasr (1997) defined religious spirituality as "the presence of a relationship with God that affects the individual's self-worth, sense of meaning, and connectedness with others and nature".

This study adopted the variable measurements from previous studies. In assessing the level of work engagement, this study adopts instrument that developed by Schaufeli and Bakker (2003) which consist of 3 dimensions (vigor, dedication, and absorption (Schaufeli & Bakker, 2003). In assessing the level of workload, this study adopts instrument that developed by Van Den Oetelaar, Van Stel, Van Rhenen, Stellato, and Grolman (2016). In term of religious spirituality, this study adopts instrument that developed by Kendler et al.





(2003). Respondents rated their degree of agreement with the work engagement and religious spirituality statements based on a five-point scale ranging from '1' "never" to '5' "always". While workload is scaled with five-point Likert scale, ranging from '1' "not at all" to '5' "all the time"

3.4 Data Analysis

SPSS (as descriptive analysis tool) and Smart-PLS software (as inferential analysis tool) was employed in this study to analyze the data. Thru

Smart-PLS, the evaluation of outer model (measurement model) and inner model (structural model) is performed. The evaluation of outer model involves confirmation of validity and reliability of measurement constructs. In Smart-PLS, Confirmation Factor Analysis (CFA) was used to test the construct validity and the accuracy of the questions related to the variables. Table 1 provides the results of CFA of all constructs before deletion.

Table 1: Loadings and Cross Loadings (Before Deletion) (Original Model)

Items		RS	WE	WL
<i>Religious Spirituality (RS)</i>				
RS1:	I feel God's presence.	0.784	0.088	0.040
RS2:	I find strength and comfort in my religion.	0.816	0.101	-0.028
RS3:	I feel deep inner peace or harmony.	0.830	0.111	0.113
RS4:	I feel God's love for me, directly or through others.	0.723	0.102	0.152
RS5:	I am spiritually touched by the beauty of creation.	0.736	0.123	0.087
RS6:	I think about how my life is part of a larger spiritual force.	1.112	0.223	0.210
RS7:	I work together with God as partners to get through hard times.	0.484	0.096	0.055
RS8:	I try to find the lesson from God in crises	0.784	0.109	0.098
RS9:	I look to God for strength, support, and guidance in crisis.	0.514	0.077	0.061
RS10:	I confess my sins and ask for God's forgiveness.	0.773	0.122	0.010
RS11:	I involved my religion in understanding or dealing with stress situations in any way.	0.846	0.229	0.011
<i>Work Engagement (WE)</i>				
WE1:	At my work, I feel bursting with energy.	0.176	0.751	-0.098
WE2:	I find the work that I do full of meaning and purpose.	0.165	0.681	-0.096
WE3:	Time flies when I am working.	0.035	0.541	-0.063
WE4:	At my job, I feel strong and vigorous.	0.077	0.761	-0.070
WE5:	I am enthusiastic about my job.	0.130	0.783	-0.090
WE6:	When I am working, I forget everything else around me.	0.115	0.485	-0.071
WE7:	My job inspires me.	0.178	0.747	-0.134
WE8:	When I get up in the morning, I feel like going to work.	0.058	0.862	-0.074
WE9:	I feel happy when I am working intensely.	0.191	0.762	-0.086
WE10:	I am proud of the work that I do.	0.231	0.754	-0.067
WE11:	I am immersed in my work.	0.021	0.399	-0.112



Items	RS	WE	WL
<i>WE12</i> I can continue working for very long periods at a time.	0.011	0.553	-0.079
<i>WE13</i> : To me, my job is challenging.	0.168	0.240	-0.010
<i>WE14</i> : I get carried away when I am working.	-0.053	0.237	-0.040
<i>WE15</i> : At my job, I am very resilient, mentally.	0.114	0.675	0.009
<i>WE16</i> : It is difficult to detach myself from my job.	0.055	0.411	-0.014
<i>WE17</i> : At my work, I always persevere, even when things do not go well.	0.087	0.609	-0.053
<i>Workload (WL)</i>			
<i>WL1</i> : Did you have to work very fast?	0.062	-0.046	0.750
<i>WL2</i> : Did you have too much work to do?	0.053	-0.048	0.734
<i>WL3</i> : Did you consider your work mentally very challenging?	0.133	-0.073	0.818
<i>WL4</i> : Did your work demand a lot from you emotionally?	0.026	-0.062	0.730
<i>WL5</i> : Did you find your work physically strenuous?	0.072	-0.136	0.701

Accordingly, there were 12 deleted loadings (bolded in Table 1) because they were lower than 0.70. They were RS7, RS9, WE2, WE3, WE6, WE11, WE12, WE13, WE14, WE15, WE16, and WE17. After deleting these items, all the remaining items that measured a particular construct loaded highly on that construct and loaded lower on the other constructs, thus confirming construct validity. The results of CFA of all constructs after deletion are summarized in Table 2 as follow.

Table 2: Factor Loadings (After Deletion)

Constructs	Items	Loadings
Work Engagement	WE1	0.751
	WE4	0.761
	WE5	0.783
	WE7	0.747
	WE8	0.862
	WE9	0.762
	WE10	0.754
Workload	WL1	0.750
	WL2	0.734
	WL3	0.818
	WL4	0.730
	WL5	0.701
Religious Spirituality	RS1	0.784
	RS2	0.816
	RS3	0.830
	RS4	0.723
	RS5	0.736
	RS6	1.112
	RS8	0.784
	RS10	0.773
	RS11	0.846

Reliability of measurement constructs can be seen by looking at the Cronbach's alpha and composite reliability values that should be higher than 0.70 (Hair, Ringle, & Sarstedt, 2011). The values of average variance



extracted (AVE), Cronbach's alpha, and composite reliability of constructs in this study was demonstrated in Table 3. It is evident that all constructs exceeded the recommended value of 0.70. Hence, it indicates that the constructs of this study have strong reliability.

Table 3: Reliability Analysis (After Deletion)

Variable	Total Items (After Deletion)	AVE	Cronbach's alpha	Composite Reliability
Work Engagement	7	0.518	0.881	0.882
Workload	5	0.411	0.784	0.774
Religious Spirituality	9	0.505	0.911	0.897

The AVE measures the variance encapsulated by the indicators relative to measurement error and this should be higher than 0.50 to justify the use of the construct (Hair *et al.*, 2011). In table 3, it shows that both work engagement and religious spirituality have AVE value higher than 0.50 (0.518 and 0.505 respectively). Meanwhile, the AVE value for workload was 0.411, below the recommended range. Anyhow, Fornell and Larcker (1981) stated that even if AVE is less than 0.50, but composite reliability is higher than 0.60, the convergent validity of the construct is still adequate (Hair, Ringle, & Sarstedt, 2013). This statement implies that workload has adequate convergent validity since it has composite reliability value that higher than the recommended range (0.774). In a nutshell, the results of convergent validity of this

study show that the entire latent variables satisfied the threshold value and were considered to have met the standard of convergent validity.

Besides reliability analysis, the descriptive analysis also conducted in this study. This study found that work engagement has the mean value of 4.27 with the standard deviation 0.65, and the variance of 0.43. Workload has the mean value of 4.35 with the standard deviation 0.72, and the variance of 0.52. While religious spirituality has the mean value of 4.80 with the standard deviation 0.50, and the variance of 0.25. The minimum and the maximum values are reported as 3 and 5 for religious spirituality, 2 and 5 for workload, as well as 1 and 5 for work engagement. The following Table 4 summarized the findings of the descriptive statistics of this study.

Table 4: Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Standard Deviation	Variance
Work Engagement	349	1	5	4.27	0.65	0.43
Workload	349	2	5	4.35	0.72	0.52
Religious Spirituality	349	3	5	4.80	0.50	0.25

After analyzing the outer model, the evaluation of the inner model is conducted. It begins with the evaluation of the level of R^2 values, assessment of effect size (f^2), predictive relevance (Q^2) and the q^2 effect size, and goodness of fit (GoF) of the overall model. The following Table 5 summarized the evaluation of the inner model (structural model).

Table 5: Evaluation of Inner Model

	R^2	Q^2	f^2	Effect Size Rating	GoF
Work Engagement	0.335	0.140			$GoF = \sqrt{(R^2 \times AVE)}$ GoF = 0.389
Workload			0.029	Small effect	
Religious Spirituality			0.009	Very small effect	

Table 5 shows that the R^2 value of work engagement is 0.335 suggesting that the variance of work engagement can be explained by workload as much as 33.5%. In term of effect size (f^2), there was a small effect of workload on work engagement with f^2 value of 0.029. Table 5 also

displays a very small effect size of religious spirituality as moderation on the relationship between workload and work engagement with f^2 value of 0.009.



The obtained cross validated redundancy value [predictive relevance (Q^2) and the q^2 effect size] for work engagement was found to be 0.140 (see Table 5) which implies the adequate predictive capabilities and qualities of the model (Hair *et al.*, 2011). Last but not least, Table 5 shows that the goodness of fit (GoF) of the overall model is 0.389 which reflect and confirm the fitness of the structural model.

3.5 Hypothesis Testing

The significance of the path coefficients and bootstrapping which are embedded in Smart-PLS is

employed in this study in order to test significance of the hypothesis. Bootstrapping is conducted by running the data using 500 bootstrapped samples which is bigger than the actual sample size of this study, thus meeting the condition suggested by Hair *et al.* (2013). The results of t-statistics, path coefficient (beta or β), and the decision taken for the hypothesis is summarized in the Table 6 as follow.

Table 6: Summary of the Results of Hypothesis Testing

<i>Direct Effect (Hypothesis 1)</i>					
Relationship	β	Standard error	t-value	P values	Decision
WL \rightarrow WE	-0.147	0.067	1.940*	0.053*	Supported
<i>With Interaction of Moderating Effect (Hypothesis 2)</i>					
Relationship	t-value	β	R ²	Not Supported	
WL \rightarrow WE	1.632	-0.136	0.091		
RS \rightarrow WE	4.519	0.217			
Interaction (WL*RS \rightarrow WE)	1.496	-0.106			
<i>Notes:</i> t-values > 1.65* (*p < 0.10) (two-tailed test) β : Path Coefficient WL: Workload WE: Work Engagement RS: Religious Spirituality					

The critical t-values (T-statistics) for a two-tailed test are 1.65 (at 0.10 level of significance). This implies that the absolute and significant value of t-value must be 1.65 or higher (Hair *et al.*, 2010). Thus, based on this criterion and the results shown in Table 6, it can be concluded that there is a positive and a significant relationship between workload and work engagement ($\beta = -0.147$, $t = 1.940$). This indicates that the hypothesis 1 received strong empirical support.

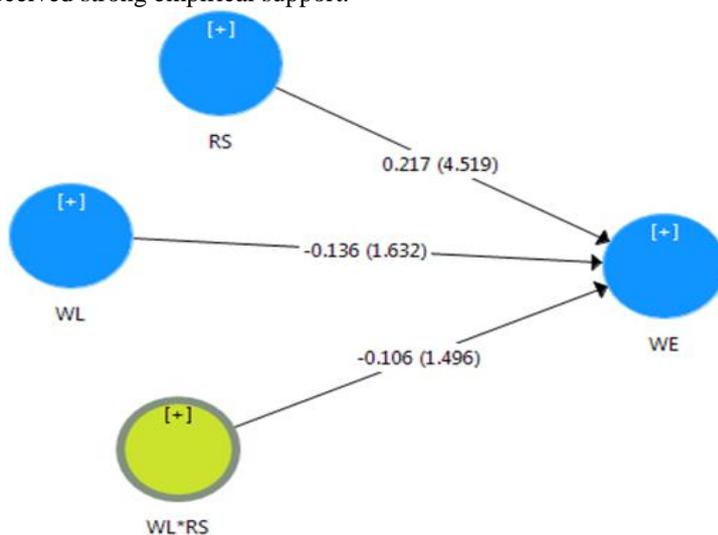


Figure 2: Moderating Effect of Religious Spirituality on Workload and Work Engagement



The result of the simple effect and the interaction effect model as shown in Table 6 and Figure 2 provides a standardized beta (β) value of -0.136 from WL to WE, 0.217 from RS to WE, and the interaction effect of -0.106 with R^2 value of 0.091. The simple effect model shows a lower standardized beta (β) value for WL \rightarrow WE and a higher standardized beta (β) value for RS \rightarrow WE with a change in R^2 from 0.017 to 0.091. The interaction upon the change in R^2 value produced a very small effect size (f^2) of 0.011 by using Cohen (1988) effect size (f^2). The significance of the interaction assessed by using 500 bootstrapped sample sizes provided an evidence of a non-significant path coefficient with t-value of 1.496 ($p < 0.10$). Hence, hypothesis H11 is not supported.

4.0 Discussion, Conclusion, and Recommendation

The hypothesis result of this study shows that the negative relationship between workload and work engagement is supported ($\beta = -0.147$, $t = 1.940$). This finding is in line with McClenahan, Giles and Mallett (2007); Taipale, Selander, Anttila and Nätti (2011); Karasek and Theorell (1990); and Kinman (2001). Nevertheless, the finding of this study was contrary to the research conducted by Crawford, Lepine, and Rich (2010); Bakker, Hakanen, Demerouti, and Xanthopoulou (2007); and Schaufeli, Taris, and Van Rhenen (2008) who found that workload does not have a negative influence on work engagement. It all depends on the individual itself, the individual who considers the workload as a challenge will feel to have more energy and relationships with the work, while individuals who assuming them as a hindrance at work source them to negatively affect their work engagement (Crawford, Lepine, & Rich, 2010). Thus, despite of above contradictions finding, the finding of this study will strengthen the evidence concerning the negative relationship between workload and work engagement.

On the other hand, the hypothesis result also found that religious spirituality has no moderating effect on the relationship between workload and work engagement ($t = 1.496$). This implies that religious spirituality does not reduce the negative effect of

workload on work engagement. This finding is inconsistent with Mintz-Binder and Sanders's (2012) assertion that besides job resources, there is a need of personal resources (e.g. religiosity, religious spirituality, etc.) interaction to reduce the effect of workload (e.g. job stress, burnout etc.) on work outcomes. Thus, this study concluded that hospital nurses do not receive adequate job resources for them to use the personal resources to cope with high job demands and engage well. In short, due to inadequate job resources received by hospital nurses, personal resource unable to reduce the negative effect of workload on work engagement. As suggested in Social Exchange Theory that both job-related and personal resources must be adequate to reduce the negative effect of workload on work outcomes.

There were several limitations that have been faced throughout the study. First, this study only focused on Staff Nurses and only conducted in public hospitals, which limits the scope of generalization. Thus, future studies may involving other types of hospitals (e.g. university hospitals, private hospitals), other industries, or other hospital workforce from other discipline (e.g. doctors, medical officers, etc.) to be able to strike a balance of the findings. For the reason that different results might be obtained if this study conducted in other job fields. Second, this study was only conducted in Malaysia, future studies may consider the applicability of similar studies in other Southeast Asia countries or beyond. Furthermore, this study is a cross-sectional study. Thus this study suggests future researchers to conduct a longitudinal study. Despite the limitations above, the findings of the study are still valid to understand the factors affecting the level of work engagement among nurses in Malaysia, and consequently provide some insight for the benefit of practitioners on how to address issues related to workload and disengagement among nurses.

Concisely, while eliminating high job demands entirely is impossible (due to complexity of nursing jobs, shortages, etc.), the hospitals managers, especially the nurses' managers need to identify the sources of resilience (e.g. religious spirituality) that can reduce any forms of job pressures as an effort in improving work outcomes (productivity, work engagement, job performance, etc.).

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